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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/470,571	06/06/1995	JOHN C. HARVEY	5634.261	7586
21967	7590	04/28/2004	EXAMINER	
HUNTON & WILLIAMS LLP INTELLECTUAL PROPERTY DEPARTMENT 1900 K STREET, N.W. SUITE 1200 WASHINGTON, DC 20006-1109			HARVEY, DAVID E	
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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

	<b>Application No.</b>	<b>Applicant(s)</b>
	08/470,571	HARVEY ET AL.
	Examiner DAVID E HARVEY	Art Unit 2614

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### **Status**

- 1) Responsive to communication(s) filed on 09 January 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### **Disposition of Claims**

- 4) Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 56-58, 60-63, 65-74, 80, 81, 84, 85, 87, 89-91, 93-95, 98, 100, 102, 103, 106-109, 183-197 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### **Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### **Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### **Attachment(s)**

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1)<input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2)<input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3)<input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br/>Paper No(s)/Mail Date _____.</li> </ol> | <ol style="list-style-type: none"> <li>4)<input type="checkbox"/> Interview Summary (PTO-413)<br/>Paper No(s)/Mail Date. _____.</li> <li>5)<input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6)<input type="checkbox"/> Other: _____.</li> </ol> |
|--|--|

**Continuation of Disposition of Claims:** Claims pending in the application are 56-58,60-63,65-74,80,81,84,85,87,89-91,93-95,98,100,102,103,106-109 and 183-197.

**A. INTRODUCTION:**

## A-1) The Continuation-In-Part (“CIP”) Designation:

All continuation-in-part (CIP) applications are not “true” continuations.

A true CIP application is one that describes and claims subject matter previously described in an earlier filed co-pending application and, being such, the claims of a “true” CIP are entitled to the effective filing date of the parent application. In contrast, applications that include the “CIP” designation but comprise claims having limitations directed to “new” subject matter that has been added via the filing of the alleged CIP application are not “true” continuations and, therefor, are not entitled to the earlier effective filing date.

**“Thus, if an application is, in fact, a true continuation application, it is entitled to the filing date of the original parent application. If, however, it discloses and claims subject matter not common to or not supported by the parent application, it is not a true continuation application and any claims therein that include new matter are only entitled to the actual filing date of the later-filed application, and not the earlier parent application”** (emphasis added)

[Reynolds Metals Company v. The Continental Group, Inc., (DC NIII), 210 USPQ 911 at 929]

Thus the “CIP” designation, itself, does not validate a claim for section 120 priority. That is, beyond the formal requirements, the CIP designation only indicates that insofar as the subject matter from the alleged parent application has actually been carried forward from the parent application into the CIP application, applicant is entitled to the earlier filing date of the parent application for claims that are directed *solely* to the subject matter which has been carried forward (i.e. for claims that are directed to “common subject matter”).

**“However, as mentioned earlier, a continuing application is entitled to rely on the earlier filing date of an earlier application only with respect to subject matter common to both applications”** (emphasis added)

[In *Transco Products, Inc., v. Performance Contracting, Inc.*, 32 USPQ2d 1077 [\*\*18]]

**“Any claim in a continuation-in-part application that is directed solely to subject matter adequately disclosed under 35 U.S.C. 112 in the parent application is entitled to the filing date of the parent application.”** (emphasis added)

[In *Transco Products, Inc., v. Performance Contracting, Inc.*, 32 USPQ2d 1077 [\*\*18]]

**“Section 120 merely provides mechanism whereby application becomes entitled to benefit of filing date of earlier application disclosing same subject matter; common subject matter must be disclosed in both applications, either specifically or by express incorporation by reference of prior disclosed subject matter”**

[*Dart Industries, Inc. v. Banner, Commissioner of Patents and Trademarks*, (CA DC), 207 USPQ 273]

More important than what the CIP designation indicates, is what the CIP designation does not indicate:

- 1) The CIP designation is not an “*Incorporation by Reference*”. To be entitled to section 120 priority, the subject matter that is to be claimed in the CIP application must be formally carried forward into the CIP from the earlier filed parent application. That is, the

subject matter that is to be claimed must be carried forward into the CIP disclosure either by:

- 1) A formal "Incorporation by Reference" of the subject matter that is to be carried forward from the parent; or
- 2) "Specific" physical descriptions of said subject matter that is to be carried forward from the parent; and

**"Applicant is confusing two distinctly different things:**

- (1) **The right to have benefit of the filing date of an earlier application under § 120 for subject matter claimed in the later application because that subject matter is disclosed in an earlier application to which a 'specific reference' is made - i.e., a reference to the earlier application per se, and**
- (2) **The incorporation by reference in an application of matter elsewhere written down (not necessarily in a patent application), for economy, amplification, or clarity of exposition, by means of an incorporating statement clearly identifying the subject matter which is incorporated and where it is to be found"**

[In re DE SEVERERSKY, 177 USPQ 146 (CCPA 1973)]

**"Statement in application that it is 'continuation-in-part' of prior application is insufficient to incorporate therein any part of prior application; all that it means is that insofar as disclosure of application finds corresponding disclosure in prior application, the application is entitled to filing date of prior application"**

[In re DE SEVERERSKY, 177 USPQ 144 (CCPA 1973)]

2) "CIP" practice does not permit an applicant to add "new matter" which alters or expands the substance of the subject matter that was disclosed in the parent application, while preserving the earlier filing date of the parent application for claims in the CIP application that recite the altered/expanded subject matter of the CIP.

**"In 1967, the Court of Custom and Patent Appeals first separated a new written description (WD) requirement from the enablement requirement of [Section] 112. The reason for this new judge-made doctrine needs some explanation. Every patent system must have some provision to prevent applicants from using the amendment process to update their disclosures (claims or specification) during their pendency before the patent office. Otherwise applicants could add new matter to their disclosures and date them back to their original filing date, thus defeating accurate accounting of the priority of invention."**

[Enzo Biochem Inc. v. Gen-Probe Inc. 63 USPQ2d 1618,1624 (CA FC 2002)]

**"[Section 120] contains no magical disclosure – augmenting powers able to pierce new matter barriers; therefor, it cannot "limit" absolute and express prohibitions against new matter contained in Section 251."**

[Dart Industries, Inc. v. Banner, Commissioner of Patents and Trademarks, (CA DC), 207 USPQ 273]

**"A continuation-in-part application is not entitled to the benefit of the earlier filing date of its parent application where the changes included within subsequent applications are 'new matter' which either alters the substance of the invention or makes the composition an invention for the first time"**

[Indiana General Corp. v. Krystinel Corp., 161 USPQ 82, 94-95]

**"To the extent that a CIP application adds new matter, claims that are dependent upon the new matter are entitled to the filing date of the CIP only and not that of the parent application"**

[Stern v. Superior Distributing Company et al., (CA 6), 215 USPQ 1089 at 1094]

**"Unlike the enablement provision of section 112, where the disclosure of a single species might be sufficient to enable a practitioner skilled in the art to make and use any member of the genus,....., the written description requirement of section 112 requires more. See Vas - Cath, *supra*. This strict reading of the written description requirement prevents an inventor from surreptitiously expanding a patent through successive continuation-in-parts.**

**See *id.* At 1562. Essentially, it limits the claims of an applicant to those inventions he clearly discloses, either expressly or inherently"** (emphasis added) [Tronzo v. Biomet Inc. (DC SFla) 41 USPQ2d 1403<sup>1</sup> citing Vas-Cath Inc. v. Mahurkar (CA FC) 19 USPQ2d 1111]

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[Applicants' application S.N. filed 07/096,097 filed 9/11/1987 has been designated a "CIP" by applicants. The question arises as to whether or not this application constitutes a "true" CIP/continuation:

- 1) Are the claims of the instant application reciting subject matter that is described in the CIP specification, which described/claimed subject matter was previously described in the original 1981 parent specification too (e.g. that which was contained in S.N. 06/317,510); or, alternatively,
- 2) Are the claims reciting described 1987 CIP subject matter so changed by the "new matter" introduced via the filing of the 1987 CIP that the "substance" of the subject matter being claimed, e.g. the invention, has been changed.

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<sup>1</sup> NOTE: this case was appealed [Tronzo v. Biomet (CA FC) 47 USPQ2d 1829]

These are not easy questions to answer given the way in which the applicants elected to draft and file said CIP application S.N. 07/096,096 of 9/11/1987. That is:

1) The 557 pages of new text that comprises applicants' instant 1987 CIP specification fail to incorporate the 44 pages of old text that comprised applicants' 1981 parent specification either:

- a) "By reference"; or
- b) "Specifically"/physically in any immediately discernible fashion.

Therefor, it is not readily apparent from the instant 1987 CIP specification as to how much, if any, of the subject matter from the 1981 specification has been carried forward into the instant 1987 CIP specification;

2) Even when one assumes that at least some teachings from the 1981 parent specification have been carried forward into the 1987 CIP specification, it is clear that these 1981 teachings have, beyond question, been extensively modified with new 1987 subject matter. Applicants themselves use terms such as "expanded", "enhanced", and "improved" to characterize such "modifications." To the extent that these modifications, i.e. the added new 1987 subject matter, has changed in the substance of the inventions described and claimed with respect to the 1987 specification, priority to 1981 effective filing date under section 120 has been lost.

Therefor, given the present state of affairs, one must not only determine exactly what it is that is now being described and claimed with respect to the 557 pages of the instant 1987 CIP specification but, to determine whether this recited subject matter is entitled to the 1981 effective filing date, one must then determined whether that which is now described and claimed was previously described, in accordance with all the same requirements of section 112, in the 1981 parent specification too (are the respective 1987 and 1981 descriptions "legal equivalents" with respect to that which is claimed). That is, one is now forced to judge whether the modified descriptions of the 1987 CIP specification alter the substance of that which is now claimed, with respect to that which was originally described in the 1981 specification, to a point where priority to the 1981 effective filing date is not permitted under section 120. That is, for each claim for which the 1981 effective filing date is sought, one is forced to consider whether it is subject matter from the 44 parent specification, carried forward into the 557 pages of the instant 1987 CIP specification, that is "*solely*" claimed (i.e. whether the claim is in fact reciting "common subject matter" described in both specifications).

**For if applicant's CIP application is not a "true" CIP application then the claims thereof are, at best, only entitled to the 9/11/1987 original filing date of the 557 page CIP specification]**

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## **A-2) Applicants' chain of pendency:**

- a) On 11/03/1981, applicants filed US Patent application S.N. 06/317,510 that eventually matured into US Patent #4,694,490. The 1981 specification of this originally filed parent application contained a written description that comprised 44 pages of text and related figures. On 2/14/1986, first continuation application S.N. 06/829,531 was filed which comprised the same 1981 parent specification.
- b) On 9/11/1987, applicants filed CIP application S.N. 07/096,096 that eventually matured into US patent #4,965,825. The specification of this 1987 CIP application contained a written description that comprised 557 pages of text and related figures. A chain of four continuation applications (i.e. 07/588,126, 07/849,226, 08/056,501, and 08/113,329) was then filed from this 1987 CIP application all of which comprised the same 1987 CIP specification.
- c) The instant application, and the 327 related bulk filed applications, were all filed as continuations of S.N. 08/113,329 and comprises the same 557 page 1987 CIP specification. For some of these applications (i.e. all claims contained therein) applicants' have alleged the 1987 effective filing date of the 557 page CIP application, whereas for the remaining ones of these applications (i.e. all claims contained therein) applicants' have alleged the 1981 effective filing date of the original 44 page parent application.

## **A-3) The Earlier Effective Filing Dates that are Alleged Under Section 120:**

### **1) The 1987 effective filing date:**

As is evident from the chain of pendency cited above, the 557 page specification of the instant application is the same as the 557 page specification of the 1987 CIP application. Being such, to obtain the 1987 effective filing date, applicant needs only show that the claims of the instant application are supported under section 112 by the 557 pages of this instant 1987 CIP specification.

### **2) The 1981 effective filing date:**

If applicants had incorporated the 44 page 1981 parent specification into the 557 pages of the instant 1987 CIP specification either via an "incorporation by reference" or "specifically"/physically in some immediately discernible fashion, then the process of obtaining the 1981 effective filing date for that which is now claimed would have been simple indeed. Applicants would only have had to draft the instant claims solely to the subject matter of the 1981 parent specification.

Applicants, however, elected not to incorporate the 1981 specification into the instant 1987 specification either "by reference" or "specifically"/physically thereby, as discussed above, making the process of obtaining the 1981 effective filing date significantly more arduous.

To obtain the 1981 effective filing date for that which is now claimed, given the current fact pattern, applicant must be able to reach back to the 1981 parent specification (and subject matter) by way of the instant 1987 CIP specification. That is, applicant must be able to show that the claim construction that results when a given claim is construed under section 112 by the descriptions of the instant 1987 CIP specification, is the same/equivalent claim construction that would have resulted had the same claim been construed under section 112 by the descriptions of the discarded 1981 parent specification; i.e. that the respective 1987 and 1981 descriptions of the claimed subject matter are legal equivalents. Stated another way, applicants' must be able to show that the claims of the instant CIP specification are directed *solely* to "common subject matter" found in both specifications; i.e. that the "claimed subject matter" that is described by the 557 pages of the instant 1987 CIP application in accordance with all of the requirements of section 112 was previously described by the 44 pages of the discarded 1981 parent specification. Stated a third way, applicants must be able to show that the instant application and claims effectively constitutes a "true" CIP application with respect to the 1981 parent application.

**"[The] bottom line is that, no matter what term is used to describe a continuing application, that application is entitled to the benefit of the filing date of an earlier application only as to common subject matter"**

[Transco Products Inc. v. Performance Contracting Inc. (CA FC 32 USPQ2d 1077)].

**"A continuation-in-part application is not entitled to the benefit of the earlier filing date of its parent application where the changes included within subsequent applications are 'new matter' which either alters the substance of the invention or makes the composition an invention for the first time"**  
[Indiana General Corp. v. Krystinel Corp., 161 USPQ 82, 94-95]

**"The question in cases in which the parent application does *not* contain language contained in the claims of the later application is whether the language which *is* contained in the parent application is the legal equivalent of the claim language, in the sense that the '*necessary and only reasonable construction to be given the disclosure [in the parent application] by one skilled in the art'* ..... is the same as the construction which such person would give language in claims of the later application."**

[WAGONER AND PROTZMAN v. BARGER AND HAGGERTY, 175 USPQ 85, 86 (CCPA 1972)].

## **A-4) Applicant's position concerning the "Dual" section 112 support:**

Presently, the examiner and applicants are in agreement that, in order for a given claim to be entitled to the 1981 effective filing date, applicants must be able to show that *some kind of "dual" 1987 and 1981 section 112 support exists* in the respective 1987 and 1981 disclosures for the given claim. The examiner and applicants, however, continue to disagree as to what this "dual" section 112 support must comprise. Specifically:

- 1) Applicants continue to take the position that the respective 1981 and 1987 disclosures may indeed describe proverbial "apples and oranges", respectively, yet the claims of the CIP application may still be entitled to section 120 priority provided that a broad "quasi-generic" claim can be drafted which independently reads on (i.e. is independently "anticipated" by) the proverbial "apples" and the "oranges" of the respective applications. That is, applicants allege that:

"[Section] 120 does not require an applicant to demonstrate that the disclosures relied upon under 120 have anything in common besides their ability to separately comply with 112-1 with respect to the claims for which priority is sought. Accordingly, the Examiner's focus on comparing the support from the two applications for similarity or common subject matter is improper and irrelevant because all applicants are required to do is satisfy 120 is show that each disclosure meets the requirements of 112-1 for a given claim." (emphasis added)  
[Page 141 of applicants' response filed on 1/28/2002 in application S.N. 08/470,571]

"Accordingly, the law requires a two part test in which the applicant separately demonstrates 112 support for each application. In the FOA, the examiner distorts this straightforward test by imposing a third element of the test whereby the 112 support from each application consists of 'common subject matter.'"  
[See the last 10 lines on page 137 of the response filed on 1/28/2002 in SN 08/470,571].

- 2) In contrast, the examiner maintains that section 112 support must come from "common subject matter" (i.e. the "same invention") described in both specifications such that the respective claim constructions that result when a given claim is construed in light of the respective disclosures is the same/equivalent; i.e.

"However, as mentioned earlier, a continuing application is entitled to rely on the earlier filing date of an earlier application only with respect to subject matter common to both applications" (emphasis added)  
[In *Transco Products, Inc., v. Performance Contracting, Inc.*, 32 USPQ2d 1077 (\*\*18)]

"The inquiry required by section 120 demands a comparison of 1) the claims of the parent and CIP applications and 2) any other disclosures made in the applications such as specification and drawing. *Acme Highway, supra*, at 1079, 167,USPQ at 132-33."

[*Stem v. Superior Distributing Company et al.*, (CA 6), 215 USPQ 1089 at 1094]

Clearly, applicants' position that the respective parent and CIP disclosures, "need not have anything in common besides their ability to separately comply with 112-

1 with respect to the claims for which priority is sought," permits and invites multiple claim constructions to exist for each claim in question; i.e.

- a) A first construction that results when the claim is construed under section 112 in light of first subject matter that is described in the child/CIP specification; and
- b) A second different construction that exists when the same claim is "separately" construed under section 112 in light of different subject matter that was previously described in the parent specification.

The examiner maintains that it is improper for multiple claim constructions to exist for a given claim within a patent application. Hence, the examiner maintains that applicants' belief that "common subject matter" is irrelevant to the section 120 priority issue seems both erroneous and flawed. Some hypothetical examples will be discussed in the following section of this Office action for the purpose demonstrating this point.

**A-5) Can an applicant use a broad “quasi-generic” claim within an alleged CIP application as a license for effecting wholesale changes to the written description (and the subject matter described therein) while maintaining priority to an earlier filing date under Section 120?**

**Applicants’ positions concerning the use of “dual” section 112 support under section 120 seem to say: “YES”.**

**The following hypothetical fact patterns are presented to illustrate why the examiner believes the answer to be: “NO.”**

**A) Hypothetical situation #1:**

- a) An applicant files a first application that **ONLY** discloses a bicycle. In this first application, the applicant presents a first claim for a “multi-wheeled cycle”.
- b) Three years into the prosecution of the first application, this applicant becomes aware of someone who invented the tricycle.
- c) At this point, the applicant files a second application that **ONLY** discloses the tricycle (it does not disclose the bicycle of the first application). Applicant alleges that this second application is “CIP” of the first application. Applicant then transfers the “multi-wheeled cycle” claim from the first application into this second application and claims priority for the transferred claim, under section 120, back to the first application. Applicant then abandons the first application.

**Is the transferred claim of the second application entitled to the earlier filing date of the first application under section 120?**

1) Clearly, the answer would have been “yes” had the disclosure of “the bicycle” from the first application actually been carried forward into the disclosure of the second application being that the claim could have been legitimately supported by “common subject matter” from both applications (i.e. specifically, by the disclosed bicycle of both applications).

2) However, under the circumstances cited above, i.e. wherein the disclosure of the first application was *discarded* and not carried forward into the second application, the case for priority under section 120 seems less than clear. Namely:

- a) When the “multi-wheeled cycle” claim was first presented in the first application it was supported under section 112 only by the disclosure of

the bicycle found in the first application. **The section 112 support for “multi-wheeled cycle” was “bicycle”.**<sup>2</sup> Most likely (but not necessarily), a fair reading of the “multi-wheeled cycle” claim would have included tricycles too.

b) However, when said “multi-wheeled cycle” claim was transferred into the second application, it was now supported under section 112 only by the disclosure of the tricycle found in the second application - i.e. being that the bicycle disclosure of the first application was not carried forward into the second application. **The section 112 support for “multi-wheeled cycle” was now “tricycle”.**<sup>3</sup> Thus, a fair reading of this same claim now necessarily (not just “most likely”) includes the tricycle.

*Thus, if priority under section 120 is accepted, then via the filing of the alleged CIP, it appears that applicant has effectively put everyone on notice (via the new disclosure of the CIP) that he invented the tricycle at the time he actually invented the bicycle.<sup>4</sup> Can this be right/proper?*

#### **B) Hypothetical situation #2:**

- a) An applicant files a first application that **ONLY** discloses a bicycle. In this first application, the applicant presents a first claim for a “multi-wheeled vehicle”.
- b) Three years into the prosecution of the first application, this applicant becomes aware of someone who invented the tricycle.

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<sup>2</sup> The “multi-wheeled cycle” limitation broadly recites the “bicycle” being that the instant written description must describe the invention that is claimed.

<sup>3</sup> Now, the new “multi-wheeled vehicle” limitation now broadly recites the “tricycle” being that the instant written description must describe the invention that is claimed.

<sup>4</sup> In *Vas-Cath Inc. v. Mahurkar* (CA FC) 19 USPQ2d 1111, 1114, it was noted that one might be inclined to question the purpose of a separate written description requirement of section 112 in view that “the invention” is in fact the subject matter that is defined by the claims being considered:

“One may wonder what purpose a separate ‘written description’ requirement serves, when the second paragraph of 112 expressly requires that the applicant conclude his specification ‘with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.’”

Reasons for having the separate descriptive requirement, as noted in *In Vas-Cath Inc. v. Mahurkar* (CA FC) 19 USPQ2d 1111, 1115, included the following:

- 1) An adequate written description of the invention provides a “warning an innocent purchaser, or other person using a machine, of his infringement of the patent; and at the same time taking from the inventor the means of practicing upon the credulity or fears of other persons, by pretending that his invention is more than what it really is, or different from its ostensible objects, that the patentee is required to distinguish his invention in his specification”; and
- 2) An adequate written description of the invention “guards against the inventor’s overreaching by insisting that he recount his invention in such detail that his future claims can be determined to be encompassed within his original creation.”

[*Vas-Cath Inc. V. Mahurkar* (CA FC) 19 USPQ2d 1115]

- c) At this point, applicant files a second application that **ONLY** discloses the tricycle (it does not disclose the bicycle of the first application). Applicant alleges that this second application is "CIP" of the first application. Applicant then transfers the "multi-wheeled vehicle" claim from the first application into this second application and claims priority for the transferred claim, under section 120, back to the first application. Applicant then abandons the first application.
- d) Two years into the prosecution of the CIP application, applicant becomes aware of someone who invented the automobile.
- e) At this point, applicant files a third application that **ONLY** discloses the automobile (it does not disclose the bicycle of the first application or the tricycle from the second application). Applicant alleges that this third application is "CIP" of the second application that is a CIP of the first. Applicant then transfers the "multi-wheeled vehicle" claim from the second application into the third application. Applicant then abandons the second application.

**Is the claim in this third application entitled to the earlier filing date of the first application under section 120?**

- a) When the "multi-wheeled vehicle" claim was first presented in the first application it was supported under section 112 only by the disclosure of the bicycle found in the first application. **The section 112 support for "multi-wheeled vehicle" was "bicycle".<sup>5</sup>**
- b) When the "multi-wheeled vehicle" claim was transferred to the second application it was then supported under section 112 only by the disclosure of the tricycle found in the second application. **The section 112 support for "multi-wheeled vehicle" was then "tricycle".<sup>6</sup>**
- C) Now that the "multi-wheeled vehicle" claim has been transferred to the third application it is now supported under section 112 only by the disclosure of the automobile found in the second application. **The section 112 support for "multi-wheeled vehicle" is now "automobile".<sup>7</sup>**

*Thus, if priority under section 120 is accepted back to the first application, then via the filing of two alleged CIP applications, applicant has effectively put everyone on notice (via the disclosure of the second CIP) that he invented the automobile at the time he actually invented the bicycle.<sup>8</sup> Can this be right/proper?*

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<sup>5</sup> The "multi-wheeled vehicle" limitation broadly recites the "bicycle" being that the instant written description must describe the invention that is claimed.

<sup>6</sup> The "multi-wheeled vehicle" limitation broadly recites the "tricycle" being that the instant written description must describe the invention that is claimed.

<sup>7</sup> The "multi-wheeled vehicle" limitation broadly recites the "automobile" being that the instant written description must describe the invention that is claimed.

<sup>8</sup> In Vas-Cath Inc. v. Mahurkar (CA FC) 19 USPQ2d 1111, 1114, it was noted that one might be inclined to question the purpose of a separate written description

1) Clearly, the answer might have been "yes" had the disclosure of "the bicycle" from the first application actually been carried forward into the disclosures of the second and third applications being that the claim could have been legitimately supported by "common subject matter" found in all three applications of the chain (i.e. said disclosed bicycle).

2) The answer is also "yes" when one adopts applicants' position that, to obtain section 120 priority, one needs only shown that each application provides some kind of section 112 support for the claim **regardless of whether the section 112 support provided by each application is similarities or not**. However, applicants' position seems flawed because it appears to confuse the section 112 requirements of section 120 with the "anticipation" standard section 102. That is, while the "multi-wheeled vehicle" claim is arguably "anticipated" in accordance with section 102 by the "bicycle" of the first application, by the "tricycle" of the second application, and by the "automobile" of the third application, the claim construction for the "multi-wheeled vehicle" limitation (i.e. the section 112 support for the claim) has clearly morphed during its travel from the first application through the second CIP application and to the third CIP application:

- a) The claim construction (i.e. the section 112 support) was "bicycle" when the claim was originally presented in the first application;
- b) The claim construction (i.e. the section 112 support) was morphed to "tricycle" when the claim was transferred to the second application; and
- c) The claim construction (i.e. the section 112 support) was morphed to "automobile" when the claim finally landed in the third application.

That is, the claim construction (i.e. section 112 support) for the "multi-wheeled vehicle" claim in the third application is "automobile". Being that this claim construction (i.e. section 112 support) was not provided by either of the first and second applications it is the examiner's understanding that this claim (i.e. its construction) is not entitled to section 120 priority back to either the first or

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requirement of section 112 in view that "the invention" is in fact the subject matter that is defined by the claims being considered:

"One may wonder what purpose a separate 'written description' requirement serves, when the second paragraph of 112 expressly requires that the applicant conclude his specification 'with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.'"

Reasons for having the separate descriptive requirement, as noted in *In Vas-Cath Inc. v. Mahurkar (CA FC) 19 USPQ2d 1111, 1115*, included the following:

- 1) An adequate written description of the invention provides a "warning an innocent purchaser, or other person using a machine, of his infringement of the patent; and at the same time taking from the inventor the means of practicing upon the credulity or fears of other persons, by pretending that his invention is more than what it really is, or different from its ostensible objects, that the patentee is required to distinguish his invention in his specification"; and
- 2) An adequate written description of the invention "guards against the inventor's overreaching by insisting that he recount his invention in such detail that his future claims can be determined to be encompassed within his original creation."

[*Vas-Cath Inc. V. Mahurkar (CA FC) 19 USPQ2d 1115*]

second application; i.e. despite applicants' position to the contrary. That is, while both descriptions provide respective 112-1 support for the claims, the respective descriptions/constructions do not appear to be legal equivalents.

**To accept such an allegation of section 120 priority seems to confuse the issue of "anticipation" under section 102 with the requirements of Section 112 that have been literally incorporated into Section 120. That is, to be entitled to section 120 priority, the Section 112 support that is provided by the respective specifications of the continuing applications must be for the "same invention" (regardless of wording); i.e. the respective descriptions must be legal equivalents with respect to that which is claimed.**<sup>9</sup>

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<sup>9</sup> It is ridiculous for applicants to suggest that the section 120 issue being raised by the examiner is the result of mere differences in "wording" between the 1981 descriptions of the discarded 1981 parent specification and the 1987 descriptions of the instant 1987 CIP specification - as applicants would like to have one believe [SEE: lines 4-9 on page 41 of the response filed 1/9/2003 in 08/470,571]. Evidence of this is found in the fact that applicants have been unable to cite respective 1981 and 1987 descriptions in support of the claims that are the same/equivalent except for their wording. To the contrary, in all cases presented thus far, applicants have ultimately been forced to argue that the cited 1981 and 1987 descriptions are "equivalent" when one overlooks and ignores the improved/enhanced/expanded 1987 SPAM subject matter that comprises the described "present invention" of the instant 1987 CIP specification.

However, what is applicants' basis and justification for ignoring and discarding the new 1987 CIP descriptions when constructing the instant claims? Can applicants properly use the discarded 1981 specification to squeeze discarded 1981 subject matter from the new 1987 CIP SPAM subject matter that is actually described in the instant 1987 CIP specification? Can applicants properly use broadly drafted "quasi-generic" claims as the tool to allege that only discarded 1981 subject matter from the discarded 1981 specification is being claimed when, in fact, the section 112 support for the claims necessarily comes from the new 1987 CIP SPAM subject matter that is (by definition) the "present invention" of the instant 1987 CIP specification?

## **A-6) While different, the fact pattern of the instant application has some significant similarities to the hypothetical examples discussed above:**

A) First, like the hypothetical examples cited above, current applicants literally *discarded* the specification of their 1981 parent application at the time they drafted and filed the instant 1987 CIP disclosure. That is, the written description of the 1981 parent specification was replaced by the new 1987 written description of the instant 1987 CIP specification; i.e. being that applicants elected not to carry forward (i.e. formally incorporate) 1981 specification therein. More to the point, like the hypothetical examples cited above, via the filing of an alleged CIP application, the current applicants have effectively replaced the description of 1981 apparatus, 1981 methods, and 1981 signaling of the 1981 parent specification with "expanded"/"enhanced"/"improved" descriptions of the 1987 "SPAM" apparatus, 1987 "SPAM" methods, and 1981 "SPAM" signaling that comprise the "present invention" of the instant 1987 CIP specification.

Note:

1) Applicants have acknowledged that the description of inventions that is provided by the 557 pages of their instant 1987 CIP specification is different than the description of inventions that was provided by the 44 pages of their original 1981 parent specification. This acknowledged difference comes as no surprise being that:

- a) The 1987 written description of the instant 1987 CIP specification is more than 510 pages longer than, and more than 12 times the length of, the 44 page written description of the 1981 parent. Clearly, at best, a substantial amount of new 1987 subject matter has unquestionably been added via the filing of the instant 1987 CIP; and
- b) The 1987 description of the instant 1987 CIP is entirely "new" in the sense that the written description of the 1981 parent specification was neither incorporated into the 1987 CIP specification "by reference" nor was it incorporated into the 1987 CIP specification in any immediately discernible fashion. This makes it extremely difficult to determine exactly how much of the 1981 subject matter, if any, was carried forward into the specification of the 1987 CIP in a way that does not constitute "New Matter".

In fact, applicants themselves have used terms such as "expanded", "enhanced", and "improved" to characterize the content of the "new" 1987 descriptions of the 1987 CIP when compared to the content of the past 1981 descriptions of the discarded<sup>10</sup> 1981 parent specification.

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<sup>10</sup> The term "discarded" accurately describes the present situation because of applicants choice not to, or failure to, incorporate the past 1981 specification into the instant 1987 CIP specification "by reference", or in any unmodified, unenhanced, unexpanded, and unimproved way whatsoever. That is, the 1981 parent specification is not part of the "instant 1987 CIP specification" due to the lack of formal/proper incorporation therein; i.e. the past 1981 parent specification itself having therefor been "discarded" in favor of the new 1987 CIP specification. The result being that the new 1987 CIP specification stands alone as the "instant specification" upon which any and all section 112 issues must be judged.

- 2) The 1987 "SPAM" acronym was specifically coined by, and used throughout, the instant 1987 CIP specification to refer to the:

"Signal Processing Apparatus and Methods of the present invention" (emphasis added) [e.g. note page 40 of the instant 1987 CIP specification]

This "SPAM" acronym provides clear evidence that the "present invention" described in the instant 1987 CIP specification was, by definition, the expanded/enhanced/improved 1987 SPAM signal processing apparatus and methods described therein.

Moreover, within the instant 1987 CIP specification, the auxiliary signaling that was conveyed by the 1987 "SPAM" apparatus and methods was explicitly identified as being "SPAM" signaling; i.e. the described "signals" of the "Signal Processing Apparatus and Methods of the present invention" of the 1987 CIP. These "SPAM signals" were described by the 1987 CIP as having comprised the sophisticated signal packet structure that is shown in figures 2E-2K of the instant 1987 CIP specification. No such sophisticated packet structure was ever shown or described with respect to the auxiliary signaling found in the discarded 1981 parent specification. Being such, the 1987 SPAM signaling represents a significant difference between the instant and discarded specifications in that it was the introduction of this sophisticated 1987 SPAM signal packet structure into the 1987 CIP which provided a transport mechanism by which the expanded/enhanced/improved 1987 SPAM apparatus and methods of the 1987 CIP specification were enabled to carry complex control and instruction information including, most significantly, "computer software". That is, it was the sophisticated packet structure of the 1987 SPAM signaling which provided the mechanism by which large sequences computer software code could be downloaded from an upstream transmitter location to a plurality of receiver locations; i.e. a feature that was not described nor provided for within the 1981 systems and methods of the discarded 1981 parent specification - despite applicants' allegation to the contrary [SEE: Appendix IV attached hereto].

Also Note: Appendix III and Appendix V attached hereto.

B) Thus, as with the hypothetical examples cited above, via the filing of the instant 1987 CIP application and a claim for section 120 priority back to a discarded 1981 parent specification, it seems that applicants are effectively putting everyone on notice (via the expanded/enhanced/improved disclosure of the instant 1987 CIP) that they invented the 1987 SPAM apparatus/methods/signaling of the instant 1987 CIP specification at the time they actually invented lesser 1981 methods/apparatus/signaling of the discarded 1981 parent specification. That is:

- 1) By *discarding* the 1981 parent specification via the filing of the 1987 CIP specification, applicants literally force the instant claims to be "constructed"/construed in the context of the new expanded/enhanced/improved 1987 SPAM apparatus/methods/signaling that comprise the "present invention" of the instant 1987 CIP specification<sup>11</sup>; while
- 2) By claiming section 120 priority for these required 1987 claim "constructions", applicants effectively obtain an earlier 1981 filing date for these 1987 claim "constructions".<sup>12</sup>

<sup>11</sup> Being that the instant specification from which all section 112 support must be derived is the instant 1987 CIP specification alone.

<sup>12</sup> Being that the discarded 1981 parent specification did not disclose the 1987 SPAM apparatus/methods/signaling and therefor does not provide section 112 support for the same 1987 CIP claim constructions.

If permitted, such a process can improperly bestow real and significant advantages on applicants who file CIP applications in this fashion.<sup>13</sup> Something is amiss. Clearly, priority under section 120 was provided as a way for preserving property rights and not as a way for going back retroactively and “expanding”, “enhancing”, and “improving” upon existing rights via one or more subsequently filed enhanced/improved/expanded CIP disclosures.

C) On pages 47 and 48 of the response filed 1/29/2003 in 08/487,526 applicant states the following:

“Applicants acknowledge that the 1987 disclosure contains numerous improvements and enhancements of the 1981 disclosure. Not notwithstanding this fact, as long as each of applicant’s inventions claimed in the instant application is described adequately in both specifications, the test under [section] 120 is met”

<The examiner agrees in part. The examiner notes, however, that the respective section 112 support for that which is claimed (the description requirement, the enablement requirement, and the best mode requirement) must be to the “same invention”; the requirements of section 112-1 of section 120 must not be confused with “anticipation” under section 102>

“If applicants attempt to include limitations of the improvement and enhancements from the 1987 specification in a given claim, that claim **could not** receive priority under [section] 120 because the claim could not be supported under [section] 112 by the subject matter disclosed in the 1981 specification.” [emphasis added]

<The examiner agrees with this statement noting that “could not” actually means:  
-- should not --; or -- could not legally -->

“This does not mean, however, that applicant cannot rely on passages from the 1987 specification that include those improvements and enhancements to support a claim that does not include those improvements and enhancements. **The question is whether or not the provided 1987 support describes the more basic inventions being claimed, regardless of whatever else those passages may also describe**” (emphasis added)

<Clearly, under section 112, the instant 1987 CIP specification must describe “the inventions” being claimed. If there are passages (or portions thereof) within the instant 1987 CIP specification that actually describe applicants’ alleged “more basic inventions”, as is clearly implied by applicants’ argument, then why do applicants not specifically cite these teaching of “the more basic inventions” as being the required section 112 support for that which is claimed. How can applicants cite passages that describe enhanced/improved/expanded 1987 subject matter **to support the claims’ limitations under section 112**, and then turn around and argue that the claims are really directed to a “more basic” invention that is, allegedly, embedded somewhere within the cited

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<sup>13</sup> It would enable an applicant to use CIP practice to enhance/improve/expand the way in which a given “quasi-generic” claim must be construed without loss of filing date.

passages to obtain an earlier effective filing date for that which is claimed. How does applicant propose one (e.g. a member of the public or an examiner) discern the "more basic inventions" that are allegedly being claimed from the expanded/enhanced/improved inventions that are actually described in the instant 1987 CIP specification when, during the course of prosecution, applicants themselves have explicitly cited this enhanced/improved/expanded 1987 subject matter as being the section 112 support for that which is claimed. In reality, is it not the expanded/enhanced/improved 1987 subject matter that is really being claimed, albeit broadly, as opposed to the 1981 inventions which were discarded along with the 1981 specification?

Again, do applicants' believe that multiple claim constructions can properly exist for each of the claims in question?

- a) That there can be a first 1987 claim construction that results when a claim's limitations are **fully** construed in light of the enhanced/improved/expanded 1987 SPAM subject matter of "present invention" that is actually described by the instant 1987 CIP specification; and, at the same time,
- b) A second "more basic" claim construction that results when the claim's limitations are **less than fully** construed in light of alleged "more basic" teachings which applicant attempts to selectively carve/infer from the cited enhanced/improved/expanded 1987 CIP teachings by suggesting that the enhancements/improvements/expansions that comprise the descriptions of the instant 1987 specification simply be discounted and ignored, even though it is this un-carved enhanced/improved/expanded 1987 CIP subject matter that applicant explicitly cites as being the section 112 support for that which is claimed.<sup>14</sup>

To the contrary, the examiner maintains that only one claim construction can properly exist for each claim in question, and that is the one that results when the claim is **fully** construed in light of the entire enhanced/improved/expanded written descriptions that comprise the instant 1987 CIP specification from which the instant claims necessarily derive their required section 112 support. If and only if, for each claim in question, its one proper claim construction finds "equivalent" section 112 support in the discarded 1981 parent specification too, e.g. if it in fact the claim recites "common subject matter", is the claim entitled to the earlier 1981 filing date of the discarded 1981 parent specification under section 120. The respective description must be legal equivalents and must describe the same invention>.

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<sup>14</sup> That is, under section 112 applicants seem to indicate that they are in fact claiming the enhanced/improved/expanded 1987 subject matter, being that it is enhanced/improved/expanded 1987 subject matter that is explicitly cited by applicant as being the required section 112 support for that which is claimed. In contrast, under section 120 applicants seem to argue/"pledge" that the claims are only directed to that portion of this cited enhanced/improved/expanded 1987 subject matter that allegedly corresponds to lesser 1981 apparatus/methods/signaling that were described in the discarded 1981 parent specification. The problem is, however, that the instant 1987 CIP specification does not support applicants' argument/"pledge" made under section 120 that the claims should be constructed/construed as being directed to the lesser 1981 subject matter of the discarded 1981 specification being that this lesser 1981 subject matter was not carried forward into the instant 1987 CIP specification in any immediately discernible fashion (nor in a way that does not incorporate prohibited "new matter").

## **A-7) Pledge Theory:**

A) Applicants' allegation, under section 120, that certain ones of the 328 bulk filed applications (i.e. the claims contained therein) are entitled to the 1981 effective filing date could be proven, where/when necessary, if applicants were to:

- 1) Specifically identify the "common subject matter" that allegedly exists within both the instant 1987 CIP specification and the *discarded* 1981 parent specification;
- 2) Draft the claims to be specifically directed to this identified "common subject matter"; and
- 3) Submit arguments indicating that the drafted claims are to be construed and construed based on so identified "common subject matter".

B) However, in contrast to this approach, applicants seem to submit conflicting arguments. Namely, applicants have and continue to:

- 1) Submit arguments, when dealing with section 112 issues, taking the position that the claims must be constructed/construed in light of all the 1987 subject matter that is contained throughout the 557 pages of the instant 1987 CIP disclosure and, therefor, should not be construed as being directed to the specific passages of the 1987 CIP specification that have been cited by applicants in support of the claims for, according to applicants' arguments, these passages have only been cited as "exemplifying" one of the many ways in which the claims allegedly find section 112 support by descriptions found throughout the 557 pages of the instant 1987 CIP disclosure; and, in contrast,
- 2) Submit arguments, when dealing with the 1981 section 120 priority issue, taking the position that the claims should not be construed/construed in light of all the subject matter that is described in the 557 page instant 1987 CIP disclosure, but rather that the claims should be construed/construed in light of alleged "more basic inventions" that supposedly exist buried somewhere within the enhanced/expanded/improved subject matter that is described by the specific passages of the 1987 CIP disclosure cited by applicants.

**"Applicants acknowledge that the 1987 disclosure contains numerous improvements and enhancements of the 1981 disclosure. Notwithstanding this fact, as long as each of applicant's inventions claimed in the instant application is described adequately in both specifications, the test under [section] 120 is met.....If applicants attempt to include limitations of the improvement and enhancements from the 1987**

**specification in a given claim, that claim could not receive priority under [section] 120 because the claim could not be supported under [section]**

**112 by the subject matter disclosed in the 1981 specification.....This does not mean, however, that applicant cannot rely on passages from the 1987 specification that include those improvements and enhancements to support a claim that does not include those improvements and enhancements.....The question is whether or not the provided 1987 support describes the more basic inventions being claimed, regardless of whatever else those passages may also describe" (emphasis added)**  
[pages 47 and 48 of the response filed 1/29/2003 in S.N. 08/487,526]

C) Applicants' contrasting arguments seems to indicate that applicants believe it proper for a given claim of a patent application to have multiple "constructions"; i.e. a first "all encompassing" construction that occurs when the claim is construed in light of the entire 1987 CIP specification (i.e. the "standard" argued by applicants when addressing section 112 support issues); and a second "more basic" construction that is limited to "more basic inventions" (i.e. the "standard" argued by applicants when addressing 1981 section 120 priority issues). Accepting this multiple claim construction argument seems to permit a process in which an applicant can draft claims which must necessarily be constructed/construed in light of "new subject matter" of a CIP application and yet, at the same time, permitting the so construed/constructed claims to capture the earlier effective filing date of a parent application which did not include the same or equivalent descriptions of this new CIP subject matter.

The examiner does not believe that such a process is permitted under Section 112-1 as incorporated into Section 120. As understood by the examiner, applicants' instant claims must be given the "all encompassing" 1987 construction as provided by the entire instant 1987 CIP specification [unless, perhaps, applicants were to submit arguments indicating otherwise (i.e. arguments which limit the way in which the claim are constructed/construed to specifically identified "common subject matter")]. The examiner maintains that the instant claims are entitled to the 1981 filing date only if/when applicant can show that this all encompassing 1987 construction finds the same/equivalent all encompassing construction in the 1981 parent specification too.

## A-7) **“Smudge Theory”:**

During the present prosecution, the examiner noted that any claim which recites even the smallest amount of “new matter” from the instant 1987 CIP specification is, at best, only entitled to the 1987 effective filing date of the CIP application which first introduced this “new matter”; e.g.

**“Why should a pending claim having limitations that are directed to even a smudge of new 1987 subject matter be entitled to the earlier 1981 filing date of the Parent specification which did not disclose that smudge of new subject matter?”**

The examiner finds nothing controversial in this stated position. Yet, on pages 29 and 30 of the response filed 1/9/2003 in 08/470,571, applicants feel the need to refute the examiner’s position (as stated). However, elsewhere within the same response, e.g. the sentence that begins in the last two lines on page 42, applicants’ affirm the examiner’s position in their own words.

**“If applicants attempt to include limitations of the improvement and enhancements from the 1987 specification in a given claim, that claim could not receive priority under [section] 120 because the claim could not be supported under [section] 112 by the subject matter disclosed in the 1981 specification.”** (emphasis added)

For the sake of argument, the examiner accepts and hereby adopts applicants’  
<sup>15</sup> wording of this issue.

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<sup>15</sup> It is noted, however, that there is no way for the examiner to formally reject a claim under section 112-1 based on the 1981 disclosure being that the instant disclosure is the instant 1987 CIP specification, and not the discarded 1981 specification. Thus, within applicants’ cited statement, it seems more accurate if the phrase “that claim could not receive” where changed to read --that claim **should** not receive” [i.e. if applicants’ claim to the 1981 effective filing date was accepted, and if applicants claim to the 1981 date was erroneous/flawed, then the claim “would” receive priority under section 120 during prosecution when, in reality, said claim “should” not have received priority].

X

**B. REAL CHANGES IN THE SUBSTANCE  
OF THE WRITTEN DESCRIPTION:**

**B-1)** As noted above all CIP applications are not "true" CIP applications. That is, if the CIP application introduces "NEW MATTER" which alters the substance of the invention being claimed, then the CIP is not a true continuation and claims which recite such altered subject matter are not entitled to the effective filing date of the parent under section 120.

**"A continuation-in-part application is not entitled to the benefit of the earlier filing date of its parent application where the changes included within subsequent applications are 'new matter' which either alters the substance of the invention or makes the composition an invention for the first time"**  
[Indiana General Corp. v. Krystinel Corp., 161 USPQ 82, 94-95]

After all, one is not allowed to use CIP practice as a vehicle to expand the substance of the invention without the loss of effective filing date.

**"Unlike the enablement provision of section 112, where the disclosure of a single species might be sufficient to enable a practitioner skilled in the art to make and use any member of the genus,....., the written description requirement of section 112 requires more. See Vas - Cath, *supra*. This strict reading of the written description requirement prevents an inventor from surreptitiously expanding a patent through successive continuation-in-parts. See *id.* At 1562. Essentially, it limits the claims of an applicant to those inventions he clearly discloses, either expressly or inherently"** (emphasis added)  
[Tronzo v. Biomet Inc. (DC SFla) 41 USPQ2d 1403<sup>16</sup> citing Vas-Cath Inc. v. Mahurkar (CA FC) 19 USPQ2d 1111]

**QUESTION:** Has the "NEW MATTER" that has been introduced by the "expanded", "enhanced" and "improved" descriptions of applicants' 557 page 1987 CIP disclosure changed the "substance" of the claimed invention?

**B-2)** Obviously, the answer to this question:

- a) Can only be answered, specifically, on a claim by claim basis that section 120 priority pertains to the claimed invention; and
- b) Needs only be addressed/considered when priority to the earlier filing date is actually needed to overcome applied intervening prior art; i.e. the issue is moot when valid intervening prior art has not been applied against the claim.

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<sup>16</sup> NOTE: this case was appealed [Tronzo v. Biomet (CA FC) 47 USPQ2d 1829]

**B-3)** Certainly, however, changes to the "substance" of that which is described by written description have been effected at all levels of the disclosure via the "new matter" that has been introduced by the drafting and filing of the instant 1987 CIP application: e.g.,

- 1) To describe the 1981 systems and methods, applicants utilized their right to be their own lexicographer and, within the 1981 parent specification, explicitly coined and defined various terms to have specific 1981 meanings. Much of the same terms/terminology has been carried forward into the description of the 1987 CIP. However, the presence of the common terminology gives a false sense of commonality between the 1981 and 1987 CIP specifications because in drafting the 1987 CIP disclosure, applicants again utilized their right to be their own lexicographer and explicitly re-coined and re-defined much of the same terminology to have different broadened/expanded 1987 CIP meanings. To the extent that these broadened/expanded 1987 definitions impart new broadened/expanded changes to the substance of the inventions that are now claimed, priority under section 120 to the 1981 effective filing date has been lost.
- 2) The 557 pages of the 1987 CIP specification describe many 1987 CIP "applications". While some of these 1987 "applications" are related to 1981 "applications" that were previously described in the discarded 1981 parent specification (e.g. the respective 1981 and 1987 "WALL STREET WEEK" applications), many of the described 1987 CIP "applications" are entirely new (e.g. the 1987 "Exotic Meals of India" application beginning @ line 39 in column 260 of US patent #5,233,654 and the 1987 "Farm Plans of Europe" application beginning @ line 25 in column 295 of US Patent #5,233,654). To the extent that these new 1987 CIP applications effect changes in the substance of the inventions that are now claimed, priority under section 120 to the 1981 effective filing date has been lost.
- 3) As noted above, some of the 1987 CIP application are "related" to the discarded 1981 applications. The most notable one of the related applications being the respective 1987 and 1981 "WALL STREET WEEK" applications; being that these related applications are most often cited and relied upon by applicants as the basis for claiming section 120 priority to the 1981 effective filing date. Despite the fact that they are "related", the 1987 CIP "WALL STREET WEEK" application is significantly different from the 1981 "WALL STREET WEEK" application; e.g.
  - a) The embedded instruct and information signals of the 1987 CIP "WALL STREET WEEK" application utilized discrete 1987 "SPAM" packet structures as the transport mechanism for the long sequences of data that were transported within the video signal in an asynchronous fashion. In contrast, the 1981 "WALL STREET WEEK" application utilized short

discrete codes sequences to trigger/cue certain receiver side actions wherein these short code sequences were transported synchronously within the video signal at one or more discrete "signal word" locations;

- b) The embedded instruct and information signals of the 1987 "WALL STREET WEEK" application comprised "computer software" and the instruct and information signals of the 1981 application clearly did not. And, quite obviously, it was the introduction of said 1987 discrete "SPAM" transport mechanism that enabled the long code sequences of the 1987 "software" to be conveyed/transmitted within the video signal;
- c) The 1987 overlays that were generated at the 1987 receivers of the 1987 "WALL STREET WEEK" applications were generated by the 1987 microcomputer under control of "computer software" that was downloaded to it as a 1987 "instruct signal" at the beginning of the 1987 "WALL STREET WEEK" program transmission. The 1981 instruct signals, on the other hand, did not carry the "software" and 1981 microcomputers of the 1981 application were therefore **preprogrammed** with said 1981 software;
- d) The synchronous nature of the 1981 "signal word" transport mechanism of the 1981 "WALL STREET WEEK" applications has a built in inflexibility due to the fact that the 1981 receivers must be preprogrammed to know in advance exactly where to look within the video transmission, and exactly where to look within one or more specific 1981 "signal word" locations, for the discrete 1981 trigger/cuing codes that it needs to detect. This implicit inflexibility seems to explain why it was the presence/absence of 1981 trigger/cuing code that was used as an on/off switching signal for causing the 1981 microcomputers to begin/cease conveying their locally generated images to an associated TV Sets for overlay with a video thereat.

In contrast, the implicit flexibility provided by the asynchronous nature of the 1987 "SPAM" transport mechanism seems to explain why the 1987 "WALL STREET WEEK" application utilized two separate instruct codes to cause the 1987 microcomputers themselves to begin and cease the overlay of the locally generated image upon a received video signal prior to providing the "combined" signal resulting therefrom to a 1987 "video monitor".<sup>17</sup>

**[SEE: "APPENDIX I" attached hereto]**

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<sup>17</sup> Note too, that is the 1987 microcomputer of the 1987 receiver which effects the overlay prior to display on the 1987 TV monitor, whereas it was the 1981 TV set of the 1981 receivers which effected the overlay during display.

To the extent that the new 1987 CIP "WALL STREET WEEK" application effects changes in the substance of the inventions that are now claimed, priority under section 120 to the 1981 effective filing date has been lost.

4) Not only has the 557 pages of the instant 1987 CIP specification effected significant changes to the substance of the described invention via the new and related 1987 "applications", but the 1987 specification also effects significant changes to the substance of the described inventions via changes/additions/modifications that have been made to the system structure itself; i.e. a fact that is readily apparent by comparing the figures of the 1987 CIP specification to the figures of the discarded 1981 specification.

To the extent that the new 1987 CIP system circuitry/structure effects changes in the substance of the inventions that are now claimed, priority under section 120 to the 1981 effective filing date has been lost.

X

**C. TELETEXT "PRIOR ART":**

**C-1)** When applying "prior art" against pending amended claims, it is both proper and fair for the examiner to draft a rejection based on the ordinary level of skill in the art that existed at the time of applicants' alleged invention. Being such, when applying the prior art of record against the pending amended claims, it is both proper and fair for the examiner to assume that one of ordinary skill in the art would have understood the way in which "standardized" teletext transmission systems operated to format and distribute "pages" of teletext data through conventional TV networks. Namely, it should NOT be necessary for the examiner to provide teachings in order to explain/evidence the "basics of teletext", for such basics were notoriously well known and would have been understood by one of ordinary skill in the art at the time of applicant's alleged invention.

Despite this fact, applicants continues to submit arguments that mischaracterize the way in which "standardized" Teletext systems operated to convey Teletext data through conventional TV networks. Via such arguments, applicants not only impose an unrealistically low level of skill onto section 102 and 103 issues, but applicants effectively place a heavy burden on the examiner to provide an education in what was notoriously well known (i.e. to try to ensure that the teachings/showings of the applied Teletext "prior art" are considered in the context that they would have been read and understood by one of ordinary skill in the art at the time of applicants' alleged invention). For example, when a piece of applied Teletext "prior art" refers to Teletext "pages", there should be no need for the examiner to explain what a Teletext "page" is, what the teletext page comprises, and how the teletext page conveys its data/information. Most certainly, one of ordinary skill in the art would have known such facts! To the point:

## **C-2)**

### **1) "Discrete signals":**

When applicants mischaracterize teletext prior art by alleging that conventional teletext "pages" were not comprised of "discrete signals", applicants force the examiner to provide explanations and showings that should be unnecessary. This adds an appearance of complexity to rejections made under section 102 and 103 where there should be none. Here, it is interesting to note that much (if not most) of the "prior art" which has been submitted for consideration by applicant during the present prosecution is in fact teletext "prior art", thereby indicating that the examiner is not the only person who recognizes the significant relationship that clearly exist between "extended" teletext packet systems and the "SPAM" message packet structure of applicants' own claimed invention(s). In submitting such prior art for consideration, applicant appears to be aware of this significant relationship too.

**For clarity of the record:**

The examiner maintains that one of ordinary skilled in the Teletext transmission art would have understood that substantially all (if not all) "standardized" Teletext transmission systems operated by:

- 1) Breaking each complete displayable or non-displayable form of Teletext information down into a plurality of discrete "information portions" that can be conveyed via the available bandwidth;
- 2) Utilizing "discrete packet signals" to carry these created discrete information portions through a given TV network by embedding each of the discrete packet signals into a respective video line interval of distributed TV programming; and
- 3) Recovering desired ones of the complete displayable and non-displayable forms of Teletext information on the receiver side of the system via a Teletext decoder that functioned:
  - a) To receive the distributed TV signals containing the embedded discrete Teletext packet signals;
  - b) To separate the embedded discrete Teletext packet signals from the received TV signals;
  - c) To decode the separated discrete Teletext packet signals and to extract those information portions therefrom which correspond to a respective complete displayable or non-displayable form of Teletext information desired by the receiver side of the system;
  - d) To organize (e.g. re-organize) the extracted information portions so as to recover the desired complete displayable or non-displayable form of Teletext information; and
  - e) To use the recovered complete displayable or non-displayable form of Teletext information at the receiver side to:
    1. Instruct the receiver side of the system as to how to "locally generate" a displayable Teletext image when the recovered information represents a displayable image;
    2. Trigger equipment of the receiver side of the system to take certain action when the recovered information represents equipment control signaling;

3. Load a computer/microprocessor at, or within, the receiver side of the system when the recovered information represents "Telesoftware";
4. Identify the TV program and/or the TV network of the programming currently being received; and
5. ETC,...

In the response filed on 1/28/02 in SN 08/470,571, applicant refutes the fact that one of ordinary skilled in the art would have had such a basic understanding of "prior art" Teletext systems. Applicant goes so far as to characterize the examiner's position concerning the inherent existence of "discrete signals" within standardized Teletext transmission systems as only being "hypothetical" in nature [e.g. lines 4-9 on page 356 of the amendment filed 1/28/02 in SN 08/470,571]. The examiner could not disagree more. Hence, via "APPENDIX VII" of this Office action, the examiner attempts to establish a "floor" below which applicants' erroneous characterizations, misunderstandings, and/or misrepresentations of the conventional Teletext "prior art" should not be allowed to sink.<sup>18 19 20</sup>

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<sup>18</sup> The 1979 publication entitled "THE CONCEPT OF A UNIVERSAL 'TELETEXT' (BROADCAST AND INTERACTIVE VIDEOTEX) DECODER, MICROPROCESSOR BASED" by Marti is also cited for its showing and descriptions of "universal" videotex decoder structure and processing [e.g. NOTE: The description under the heading "2-POSITION OF THE PROBLEM" on page 1 of the publication; figure 3; etc,...].

<sup>19</sup> The 1980 publication entitled "Broadcast Text Information in France" by Marti is cited for its brief description of teletext packet structure [note lines 2-14 on page 361].

<sup>20</sup> Note too the summary of "well known" teletext packet structure in lines 11-22 in column 1 of US Patent #4,660,202 to Woodsum.

**C-3)****2) "LOCALLY GENERATED":**

Applicants continue to allege that displayed teletext images are not "locally generated" images. The examiner disagrees and, again, notes the following:

1) Teletext transmission systems conventionally comprised:

- a) At least one teletext editing terminal that was located on the transmission side of the TV network; and
- b) A plurality of teletext decoders that were located within respective TV receivers (or attached thereto) on the receiver side of the TV network.

Each teletext editing terminal and each teletext decoder conventionally comprised a memory that stored randomly accessible display data representing a limited repertoire of displayable character/graphic fonts and symbols.

At the editing terminal, a teletext editor created each page of teletext data by entering a sequence of commands into the editing terminal, wherein the entered sequence of commands defined an instruction set which told the editing terminal as to how to select, assemble, and display pluralities of the stored character/graphic fonts and symbols so as to "generate" a desired teletext image. Once the desired image was completed, the teletext editing terminal operated to store data representing the so formulated instruction set as a respective teletext page (the "generated" teletext images themselves were not stored). A teletext scheduling terminal was then used to schedule the cyclical transmission of ones of the stored instruction sets, i.e. teletext pages, over the TV network.

On the receiver side of the TV network, each user inputted "user specific" data, e.g. user selected teletext page numbers, into their respective teletext decoder that was then locally stored within the decoder. This locally stored user specific data identified the teletext page or pages that were to be displayed by the respective TV receivers. In response to the stored page numbers, each teletext decoder searched through the cyclically transmitted instruction sets to find the instruction set that was labeled with the page number that corresponded to the locally entered and stored page number. Once detected, the discrete packets of the instruction set were captured, organized, and stored within the decoder. The captured and stored instruction set was then "executed" by decoder in

order to instruct the decoder as to how to select, assemble, and display pluralities of the stored character/graphic fonts and symbols from its own locally stored repertoire *in order to "locally generate" the desired teletext image that was to be displayed.*

The accuracy of the examiner's position, concerning the fact that teletext page data represented instruction that teletext receivers/decoders executed in order to "locally generate" their displayed teletext images, is evident in the prior art of record:

**"The first step in teletext service is the translation by a teletext editor of text, pictorial information and display attributes (such as color, flashing characters and so on) into a series of instructions to be transmitted to the teletext decoder. The instructions for each page in the teletext 'library' are then broadcast continuously on a revolving basis by multiplexing the data into the vertical blanking interval. The user accesses a desired page of teletext information by entering the page number, e.g. by pressing the appropriate buttons on a control unit. The teletext decoder then selects the page from the revolving transmission, stores the coded information in memory, processes that information to the extent necessary for display, and produces the page on the television screen. Where captioning is transmitted, the decoder will superimpose the captioning over the normal television picture" (emphasis added)**  
[Page 5 of the 3/26/1981 "Petition For Rulemaking" file with the FCC by the United Kingdom Teletext Industry]

**"[Videotex] data transmitted do not represent directly the picture which is generated in the receiver, but encoded instructions to the receiving decoder"**

[Lines 8-10 under the heading "1-Scope" on the first page of the article "The Concept of a Universal 'Teletext' (Broadcast and Interactive Videotex) Decoder, Microprocessor Based]

**"The [teletext] receiving equipment can be conventionally thought of as consisting of three sections: a) signal acquisition, b) memory, c) display generation. The signal is acquired and suitably processed before being loaded into memory. Memory is repeatedly accessed by the display generation section to obtain the instructions which direct it to create the images of alphanumeric and graphic characters and place them on the screen" (emphasis added)**

[The first paragraph under the heading "Receiving Equipment Options" on page 539 of the 1980 article "THE ROLE OF THE TELEVISION RECEIVER MANUFACTURERE IN THE UNITED STATES" by Ciciora et al.]

**"It must be clearly held in mind that the [teletext] image displayed on the CRT is synthetic video and that the synthesis is done locally" (emphasis added)**

[The first two lines under the heading "Synthetic Video" on page 545 of the 1980 article "THE ROLE OF THE TELEVISION RECEIVER MANUFACTURER IN THE UNITED STATES" by Ciciora et al.]

**"In a picture display device for displaying a mixed picture signal which signal comprises a conventionally received television**

**picture signal and a locally generated signal, such as a teletext sub-title..."**

[The first 6 lines in the abstract of GB 2,062,401 patent document to Korver]

**"Picture display devices of such type, have a picture screen on which a mixed picture signal can be displayed are known. By means thereof pictures can be displayed in which locally generated characters, drawing elements and similar items can be superimposed on a normal picture, for example a moving picture transmitted, for example, by a transmitter and received in a conventional manner. Such a signal can be generated by, for example, a teletext decoder in the display device" (emphasis added)**

[The first paragraph under the heading "Background of the Invention" in column 1 of US Patent #4,347,532 to Korver]

**C-4)****3) Computer implemented teletext decoders:**

**A)** At the time of applicants' alleged invention, it was notoriously well known in the art to have implemented "basic" level teletext decoding circuitry, i.e. decoding circuitry that was capable of providing basic teletext decoding features, using dedicated logic circuitry [NOTE: figure 1 of Barnaby (U.S. Patent #3,982,064)]. The implementation of *basic* level decoders using dedicated circuitry was recognized as being practical given its low unit "cost"; i.e. such decoders were inexpensive to produce.

While not required/mandatory, at the time of applicant's alleged invention, it was also notoriously well known in the art to have implemented even said "basic" level teletext decoding circuitry using a software driven "computer" in place of some or all of the dedicated logic circuitry [Note: lines 50-54 on page 1 of Betts (GB # 1,556,366); and, Compare figure 1 of Betts (GB #1,556,366) to figure 1 of Barnaby (U.S. Patent #3,982,064)]. The computer implementation of teletext decoders was recognized as having been advantageous/desirable over dedicated circuitry implemented decoders due to their inherent flexibility [e.g. 70-73 on page 1 of Betts (GB # 1,556,366)].

In fact, the computer implementation of the teletext decoder was known to have been required/"mandatory" when implementing "advanced" level decoders capable of providing advanced teletext decoding and display features [e.g. note section 5.3.1.3 of the "EIA Systems Analysis Chart" (revised as of August 20, 1981)]. The additional cost of the computer implemented teletext decoder was even deemed "appropriate" at the time of applicant's alleged invention with regard to "intermediate" level teletext decoders [e.g. note section 5.2.1.2 of the "EIA Systems Analysis Chart" (revised as of August 20, 1981)].

**B)** Figure 3 on page 365 of the 1980 article "Broadcast Text Information in France" by Marti is described as being an illustration of: "The general structure of an Antiope receiver". As illustrated, the "decoder" within the "general structure" of the Antiope receiver was implemented using a software driven computer (i.e. the illustrated "microprocessor").

**C)** Figure 3 of 1979 publication entitled "THE CONCEPT OF A UNIVERSAL 'TELETEXT' (BROADCAST AND INTERACTIVE VIDEOTEX) DECODER, MICROPROCESSOR

BASED" by Marti is described as being illustrative of: "Structure of a 'universal' videotex decoder". As illustrated, the "processing unit" of the "universal" decoder structure comprised a software driven computer (i.e. the illustrated "microprocessor").

**[Here, it is also significant to note that Marti explicitly indicates that the software used to program the "microcomputer" could be provided and loaded into the universal decoder "from a line (broadcast or telephone)" [see the paragraph in lines 22 on page 6 of this publication].]**

**C-5)****4) The "Mixed" display mode:**

A) It was notoriously well known by those of ordinary skill in the Videotex art, at the time of applicants' alleged invention, that Videotex transmission systems encompassed two components: 1) A one-way teletext system component; and 2) A two-way viewdata system component.

**"Videotex has two distinct forms of information transmission – Teletext and Viewdata. Teletext is the transmission of textual data and graphics to a consumer adapted television set using broadcast transmission techniques. Viewdata is the interconnection of a home terminal device to a host computer via narrow band transmission facilities, such as a telephone line.**

**Although Teletext and Viewdata display information on a consumer TV screen in similar fashion, they have managed to evolve separately. Each of the two techniques has its own advantages and disadvantages. In Teletext, data is sent as a recirculating data stream. The amount of data stream is limited only by the number of transmission scan lines available for data transmission and the predetermined acceptable latency between page selection and display. Viewdata provides almost instant access to a large number of display pages with minimum access time. However, because it is similar to a timesharing service, telecommunication and computer port requirements have high associated cost burdens."**

[Pages 14 and 15 of the article "Videotex Services via CATV – Hybrid Systems Approach" by Dages].

B) At the time of applicant's alleged invention, it was notoriously well known in the Videotex art for Videotex display devices to have provided a "***mixed display mode***" in which Videotext image data was simultaneously displayed, as an overlay or inset, within the video component of received TV programming. Such a state of the art is clearly established via the following citations:

- 1) That which occurs when signal V2 is selected for display via button 16 of the remote control unit 9 shown in figure figure 4 of Oono et al. [JP 55-028691];
- 2) That which occurs when a combined signal is selected via selector switch "S" that is shown in figures 2 and 3 of Yokoyama [JP 54-154215];
- 3) That which occurs when input "2" of switch "3" in figure 4 of Hutt et al. [US #3,961,137] is selected for output;

- 4) That which is described in lines 29-44 on page of Turner [GB Patent #1,486,424];
- 5) That which is described in the last paragraph on page 356 of the article entitled "Teletext/Viewdata LSI" to Harden;
- 6) That which is described in lines 40-45 of column 4 of Ciciora [US Patent #4,233,628].

C) During the present prosecution, applicants' have alleged that said well known a "***mixed display mode***" of Videotex pertained only to the teletext form of Videotex and did not pertain to the Viewdata form of Videotex. The examiner maintains that applicants' allegation is erroneous. That is, while the "***mixed display mode***" of Videotex is often described in the prior art with respect to the teletext component of Videotex given the fact that Teletext often carried "program related" information requiring simultaneous display, those of ordinary skill in the art recognized nonetheless that the "***mixed display mode***" of Videotex was applicable to the Viewdata form of Videotex too. This fact is evident in the following citations:

- 1) The first three lines on page 11 of the PTO provided Tsuboka et al. translation [JP 55-45248] evidences the fact that the "***mixed display mode***" of Videotex systems were known to have applied to the display of the Viewdata component of Videotex too; <sup>21</sup>
- 2) While the display mixed display mode described in lines 40-45 of column 4 in Ciciora [ US #4,233,628] was described with respect to teletext data display, Ciciora explicitly indicated that this teletext display process described therein had equal applicability with respect to Viewdata display too [e.g. lines 46-52 of column 2];
- 3) The article "Teletext/Viewdata LSI" by Harden:
  - a) Described the system of figure 2 which was capable of receiving and displaying Teletext data or Viewdata data, wherein the circuitry of figure 2 comprised:
    1. The illustrated "DATA ACQUISITION" chip (shown in detail in figure 3);

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<sup>21</sup> "A display switching circuit 29 is a circuit which switches or superimposes a television signal demodulated by the color demodulation circuit 21 to/on the aforesaid character pattern display signal. By switching these signals, a conventional television broadcast may be switched to or superimposed on a character pattern information service broadcasted or sent over a telephone circuit, and displayed on the CRT 31"

2. The illustrated "STORE"/ RAM; and
  3. The illustrated "Video Generator" chip (shown in detail in figure 4).
- b) Explicitly stated that once the Teletext and/or the Viewdata had been acquired and loaded into the "store"/RAM, the video generation and display by the Video Generator chip could proceed without knowledge as to whether the data being processed was acquired from the Teletext source or the Viewdata source [e.g. the first paragraph under the heading "II. Video Generator" on page 356 of the publication]; and
- c) Explicitly stated:
1. That the "Video Generator" chip had the "**ability to display both text and picture [at] the same time**"; and
  2. That "**if the TV circuitry is fast enough a MIX mode will enable all characters to be inset into the TV picture**".

[SEE: the last paragraph on page 356].

Clearly, the above noted descriptions in Harden, indicated:

- 1) That once acquired and stored, captured Viewdata data and Teletext data were, or at least could be, processed and displayed in like fashion by the Video Generator, wherein the video generator was described as having had the ability to display both text and video at the same time; and
- 2) That, in any event, "**all**" text data that was produced by the Video Generator, regardless of source, could be displayed in a "mixed" mode provided that the (switching) circuitry of the TV was fast enough.

D) On a more general note, the examiner maintains that it was notoriously well known in the art that TV receiver circuitry that was configured to operate in a "**mixed display mode**" were known to have been advantageous in that they permitted the display of auxiliary information (i.e. be it videotext data, computer data, auxiliary video information, on-screen display, etc,...) without interruption to the content of TV programming currently being viewed by the viewer [e.g. note, for example, lines 68-80 on page 4 of Yoshino et al. (GB 1,405,141)].

X

**D. ADDITIONAL ISSUE:**

**D-1) The “Software” Issue:**

A) The examiner notes that applicants instant 1987 CIP specification describes at least one embodiment of invention that used signaling, embedded within the VBI of TV programming, to download computer software to the ultimate receiving stations in order to have programmed/reprogrammed the station on the fly [note pages 20-27 of the instant 1987 CIP specification]. Throughout much of the present prosecution, applicants have alleged that the past 1981 parent specification implicitly described this same downloading of computer software via the 1981 “instruction signals” of the 1981 inventions that were embedded within the VBI of the 1981 TV programming. The examiner maintains that applicants’ allegation is untrue for reasons that have been addressed throughout the record [SEE: Appendix IV of this Office action].

Now, within the “Declaration of Dr. George T. Ligler” filed with the response of January 9, 2003 in application #08/470,571, applicants’ expert comments on this issue stating that the examiner has “overlooked” the fact that the 1981 specification explicitly states that the ultimate receiver station of the 1981 inventions might be “reprogrammed” from a remote location via a telephone line. The following is noted:

- i. The fact that the 1981 specification taught that the 1981 receiver stations might be reprogrammed from a remote location over a telephone line has absolutely nothing to do with the examiner’s longstanding position that the 1981 specification does not teach the downloading of software via the 1981 “instruction signals” that were embedded in the VBI of the 1981 TV programming. Clearly, the comment made by applicants’ expert does not address the issue that it purports to address. If, however, the expert’s position is representative of the kind of “dual” 112 support that he (and applicants) are still relying on for proof of “priority” under section 120 (i.e. that the 1981 description of reprogramming a receiver via a telephone line allegedly provides “priority” to the 1981 filing date for claims directed to the 1987 downloading of software via the embedded SPAM signaling), then the examiner cites it as another example of the diverse nature of the subject matter from the respective 1981 and 1987 CIP specifications that is being relied upon by applicants to allege, and attempt to obtain, the 1981 effective filing date for the 1987 subject matter that is now being claimed (i.e. further evidence that applicants have indeed confused “anticipation” under section 102 with the adequate written description requirement of section 112 that has been incorporated into section 120); and
  
- ii. The 1987 CIP specification explicitly describes at least one embodiment of invention where the 1987 ultimate receiver station was reprogrammed on the fly, e.g. during a TV program, via instruct signaling embedded therein. The statements from the 1981 specification that have been cited by applicants’ expert only indicate that that the 1981 receiver stations were capable of being

"reprogrammed" from a remote location via the telephone line, but it does not appear to give any indication whatsoever as to when this 1981 reprogramming process was to have occurred. That is, the cited 1981 teachings do not state or describe and embodiment in which the 1981 reprogramming of receivers occurred "on the fly" as applicants' expert suggests.<sup>22</sup> To the contrary, these cited 1981 teachings might only have been an indication that the 1981 receiver stations could be remotely initialized in the presence of a technician during installation and/or in the presence of a technician during a service "tier" modification - (who knows?). It appears that the expert has improperly imparted specific meaning/"purpose" to the cited 1981 remote "reprogramming" descriptions when in fact the 1981 descriptions were themselves silent as to such meaning/purpose (i.e. the specific meaning/"purpose" imparted onto the 1981 teachings by the expert appears to be speculation improperly imported back into the 1981 descriptions from the 1987 CIP). The examiner maintains that it is improper for applicants (or their expert) to read and/or import specific meanings that may be reasonably inferred from teachings of the 1987 CIP specification back into lesser teachings of the 1981 specification that do not reasonably infer these same meanings. Certainly, teachings imported into the 1981 parent specification from the 1987 CIP specification cannot legally serve as a basis for priority to the earlier effective filing date under section 120.<sup>23</sup>

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<sup>22</sup> Due to the synchronous nature of the 1981 "signal word" structure, it would appear that all of the receiver stations of the 1981 networks would have had to be reprogrammed with new detection "patterns" so as to know where and when to look for the instructions/information directed thereto whenever the content of the "words" was changed, thereby making the process of reprogramming the 1981 receivers "on the fly" a major undertaking (if possible at all within the allotted time). In any event, nowhere within the 1981 specification was such reprogramming on the fly ever described or suggested.

<sup>23</sup> The instant examiner continues to struggle with this issue. Clearly, the "new" 1987 CIP specification explicitly changes and/or expands the terms and teachings of the 1981 parent specification. In claiming a 1981 effective filing date for claims that necessarily derive their required section 112 support solely from these changed and expanded 1987 CIP disclosures, it appears to the instant examiner that applicants' are effectively transporting the changed/expanded 1987 CIP subject matter of the instant claims back in time to the 1981 date (i.e. effectively importing this changed/expanded 1987 subject matter back into the 1981 specification). This seems to be the reason why applicants have found it necessary to argue again and again, e.g. throughout the course of the present prosecution, that "common subject matter" is not a requirement of section 120 (i.e. rather than explaining where the claimed subject matter is disclosed in both applications and why this subject matter does in fact constitute "common subject matter").

**D-2) THE "MODE II" CAPTIONING FEATURE OF "ANTIOPE":**

1) Those of ordinary skill in the art, at the time of applicant's alleged invention, had recognized that there was a need and desire to transmit closed captioning data pertaining to multiple different languages within each TV program transmission. Because teletext captions had to be transmitted sequentially through the TV network, it was found to be difficult to simultaneously synchronize the display of all the different captions/languages to the same TV programming. Hence, a "Mode II" captioning feature was developed and added to new teletext "standards" (e.g. ANTIOPE) for the expressed purpose of simultaneously synchronizing multiple captions to the same program.

**"The possibilities of teletext closed captioning for the hearing-impaired and for foreigners are well known and were first experimented in the United Kingdom. The problem of synchronizing the TV program and the captions was not really solved, except at the price of heavy time delay constraints. If several different languages are to be captioned at the same time with a given program, new developments are needed, because asynchronism appears for multilanguage captioning applications. The new standards make it very simple to add sophisticated captioning options to a normal teletext decoder: in this new process, the synchronism control signal are completely separate from the 'character attributes' - they are actually considered as a 'message attribute'.**

[e.g. section 5.1.3 on page 33 of the 3/1980 publication "Development & Application of the Antiope-Didon Technology"]

2) The way in which these "new" teletext standards solved the synchronism problem seems best explained within the prior art of record by the "CBS/CCETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIOPE)" which is dated May 20, 1981. [SEE: sections 7.0-7.3 on pages 135-138; and sections 8.9.1 to 8.9.2.2 on pages 159-162]. That is, as explained within this publication:

- a) Different classes of captioning (and different levels thereof) were transmitted from the transmitter as conventional teletext pages prior to the time that they were to be displayed;
- b) Each receiver captured and stored (but did not display) the page of teletext data which corresponded to the class (and the level) of captioning that was selected and desired by the user;

- c) At the desired time of display, a "reveal"/"unmask" message was transmitted from the transmitter station which caused/triggered the stored captions at the respective receivers stations to be simultaneously outputted and displayed in precise synchronism with the TV programming.

That is, the Mode II captioning feature provided the mechanism by which multiple program related messages/captions could now be transmitted sequentially and asynchronously within the TV programming, while enabling each of these sequentially transmitted captions to be displayed simultaneously and in precise synchronism with the same TV programming at different receiver stations in response to the receipt of the same reveal/unmask display signal.

**"Through use of the "Y" bytes, program related pages can also be transmitted. Program related pages are those pages that are transmitted with a television program and are intended to be a complement to the television program. One example of a program related page is captioning"**

**"Captioning is a program related teletext message that is transmitted to the decoder and superimposed over the program video at a pre-designated time. The captioning message functions in a manner similar to a normal teletext message except that instead of having to select each page individually the user selects a classification of caption and a level (from 1 to 9) and the decoder automatically displays and erases the appropriate captions at the proper times.**

**In the case of captioning the session level identifies the fact that the message is a captions. A caption message is characterized by the fact that it is displayed, not over a blank screen, as in the case of normal teletext, but rather over program video. Depending on the decoder manufacturers' option, the caption may be displayed keyed over the video or inserted into the video in a box.**

**Captions are transmitted to the decoder with a bit in the header set so that the caption is captured and put into memory but not displayed. This way many different versions of the same caption may be sent and each decoder can capture the version it chooses. When the caption is to be displayed a simple control packet is sent with the caption type designator equal to the caption to be displayed along with a reveal bit. This causes the caption to be displayed over the program video. To erase the caption another message is sent to the decoder telling the decoder to erase the page and wait for the next caption"**

It is noted that similar descriptions of this Mode II captioning feature can be found elsewhere in the prior art of record too; i.e. for example, as provided in sections

7.11.2.2 and 7.11.2.3 on pages 72 of Appendix B in the petition filed with the FCC by CBS on 7/29/1980.<sup>24</sup>

**"When many captions are sent, at various levels and in various languages, forming classes, all varieties for a given class of captions are sent far enough in ahead to allow the decoder to store the one selected. The Y caption flag (Y1, b6=1) is raised on each one, implying transparent background and suppress page display. The conceal flag (Y1, b8=1) should also be raised. After all varieties of a given caption are sent, one additional record is sent with the conceal flag low [(equal reveal) Y1, b8=0]. This single command causes all decoders which have been storing a class of captions to display it. This last command is seen by all decoders, regardless of what page number they may have been instructed to look for because this page has not number and has the alarm flag raised in the Y's (Y1, b8=1)."**

**"To remove a class of captions and leave a blank screen, an alarm page is sent with the conceal flag raised, (Y1, b8=1)."**

3) The 8/1980 publication "ANTIOPE TELETEXT CAPTIONING" also describes this same "MODE II" captioning feature of the ANTIOPE teletext standard. This publication has been cited in response to arguments that have been submitted by applicants throughout the present prosecution.<sup>25</sup> Namely:

a) This publication makes it clear that the "MODE II" captioning feature of ANTIOPE utilizes the same teletext equipment that is used for the teletext service itself being that the captions are transmitted as standard teletext pages.

**"When Antiope is employed for captioning, it uses the same equipment as for teletext"** (the second column of page 618)

**"Each caption is broadcast in the form of a page which is identical to a teletext page. The page number is used to select the language - this is the number the user keys on the decoder**

<sup>24</sup> Additionally, note sections 7.1.2 to 7.1.2.4 for systems "A" and "C" of the "EIA Systems Analysis Chart" (revised 8/20/1981).

<sup>25</sup> E.G., applicants' have attempted to distinguish the claimed invention over applied teletext prior art by arguing that the signals of teletext are not conveyed within pluralities of discrete packet signals that, therefor, must be assembled/re-assembled on the receiver side of the network. As is evident from the cited prior art, applicants' argument is simply untrue (i.e. even the shortest of teletext messages were conveyed within a plurality of discrete teletext packet signals).

**keypad. The operation is the same as for the selection of a teletext page; the decoder functions are identical”** (the first column of page 619)

b) This publication makes it clear that all the teletext pages of the ANTIOPE standard were transmitted within the “discrete teletext transport packets” of the DIDON standard and that even the shortest of the captions (i.e. the word “yes”) had to be transmitted using more than one of these discrete DIDON transport packet.

**“The word ‘yes’, wherever it is located on the screen, if it is white on black, is coded in 23 bytes (i.e. 1.15 DIDON packets), and text containing 40 characters requires 60 bytes (i.e. 3 packets)”** (the second column on page 619)

c) This publication re-emphasizes that it was the ability of the ANTIOPE system to mask (conceal) and unmask (reveal) teletext messages which enabled the ANTIOPE system to separate the act of transmitting messages/captions from the act of displaying them (i.e. a key feature that is vital to the implementation of the MODE II captioning).

**“Considerable flexibility is also given by the use of text masking and unmasking attributes. They enable us to differentiate reception, which can be stored, from display, which is requested a particular moment without being dependent on the time of transmission”** (page 619)

.....

[In applicants’ “WALL STREET WEEK” application, a “command signal” was embedded, at a specific time, within the “Wall Street Week” TV program being broadcast from a transmitter station. At each receiver station, said “Wall Street Week” program was received and the “command signal”, embedded therein, was detected. At each receiver station, the detected “command signal” triggered a locally generated user specific graphic to be displayed as an overlay over the displayed video portion of said received “Wall Street Week” program. Thus, via the embedding of a single “command signal”, the display of different locally generated user specific overlays at different receiver stations were all “synchronized” to occur at said specific time within the “Wall Street Week” program.

As is evident from the prior art of record, the MODE II caption feature of the ANTIOPE teletext standard also utilized a single common display “command signal” to cause different “locally generated” program related teletext images/captions to be simultaneously overlaid at respective TV receiver stations in precise synchronism with the TV programming to which they relate.

Namely, in mode II captioning, reveal/unmask "command signals" were embedded, at specific times within, a transmitted TV program being broadcast from a transmitter station. At each receiver station, said program was received and the reveal/unmask "command signals", embedded therein, were detected. At each receiver station, each detected reveal/unmask "command signal" triggered a locally generated user specific graphic (e.g. a respective "program related caption") to be displayed as an overlay over the displayed video portion of said received TV program. Thus, via the embedding of each reveal/unmask "command signal", the displays of different locally generated user specific program related messages/captions/overlays at different receiver stations were all "synchronized" to occur at the specific times within the TV program.<sup>26]</sup>

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<sup>26</sup> Applicants' have attempted to distinguish the overlays of their "Wall Street Week" application from the "program related captioning" overlays of ANTIOPE's mode II captioning feature by arguing that teletext images/captions are not "locally generated" at the receiver. For the reasons discussed above in paragraph A-3 of this Office action, applicants' arguments are simply erroneous and misplaced.

**D-3) "INTERACTIVE" TV:****1) The Interactive System of U.S. Patent #3,008,000 to Morchand:**

As is illustrated on the cover page, Morchand disclosed an interactive multi-channel TV system that comprised:

- a) A plurality of TV stations (12-1 to 12-N) for transmitting respective TV signal segments/fragments which, taken together, represent the complete interactive TV program; and
- b) TV receiver stations each of which includes:
  1. A TV tuner (@ 18A) for receiving selected ones of the program segments/fragments;
  2. An audio display device (@22) for outputting the audio component of each selectively received program segment/fragment;
  3. A video display device (@ 42) for outputting the video component of each selectively received program segment/fragment; and
  4. Dedicated control circuitry (@ 18B, 26, 28, and 30) for controlling the TV tuner to sequentially select the program segments/fragments that are to be received based:
    - a. Control information that is embedded in the active video portion of TV programming segments/fragments (as detected/determined @ 40A-40n); and
    - b. User responses entered @ 44a-44n.

The result being a system in which each of the receiver stations, under control of dedicated circuitry, interactively "branched" through a selected sequence of the available program segments/fragments, comprised of multi-channel TV signal segments/fragments, based on a respective user's specific inputs/responses, thereby interactively producing a user specific multimedia (i.e. audio/video) presentation.

**2) The Interactive System of U.S. #3,245,157 to Laviana:**

Laviana disclosed an interactive TV system that comprised:

a) A transmitter station (not shown) for emanating interactive programming comprised of a plurality of program segments/fragments wherein, as illustrated in figure 1, the program segments/fragments comprised:

- 1) A common video signal portion for providing visual information; and
- 2) One or more audio signal portions providing a plurality of audio channels; and

b) At least one receiver station comprised of:

- 1) A TV receiver (@ 16) for receiving and displaying the common video signal;
- 2) Decoder circuitry (@ 18) for receiving the one or more audio signal portions and for locally "retransmitting" the plurality of audio channels provided therein as separate audio transmissions; and

3) And a plurality of user controlled devices (@ figure 2) each of which includes:

- a) Input keys for allowing the respective user to input responses to received/displayed program segments; and
- b) Receiving/tuning circuitry that, based on the user inputs/responses, selects and/or tunes to the one of the retransmitted audio channels which provides further information (i.e. an aural "explanation") pertaining to the user's input/response.

In Laviana, the separate audio transmissions were described as comprising separate radio transmissions requiring the user controlled device to have comprised one or more tuners for selecting the appropriate audio segment/fragment [e.g. lines 2-24 of column 4].

**3) The Interactive System of D.E. Patent Document #2,904,981 to Zaboklicki:**

Zaboklicki discloses an interactive TV system for transmitting and displaying complete interactive TV programming comprised of TV signal segments/fragments. Zaboklicki explicitly described two types of interactive programming:

- a) Interactive programming that is to be watched by a plurality of viewers at each receiver location wherein, as in the case of Laviana above, the interactive programming was comprised a common video portion and a plurality of audio channel portions [e.g. "sports and entertainment" programs]; and
- b) Interactive programming that is to be watched by a smaller number of viewers at each receiver location wherein, as in the case of Morchand above, the interactive programming was comprised pluralities of multi-channel video segments/fragments in addition to the plurality of audio channel portions [e.g. "educational and popular science broadcasts" programs].

That is:

A) As in the case of Laviana, Zaboklicki discloses an application of his invention in which each receiver station displayed a common video portion

and, in response to user inputs, selected and/or tuned to ones of the plurality of audio channel signals. The plurality of audio channels were described as having been "transmitted analogously to the known signals of foreign language translations **on audio channels or radio channels**" (emphasis added); and

B) As in the case Morchand , Zaboklicki also disclosed an interactive multi-channel TV system application of his invention. However, the system disclosed by Zaboklicki was significantly enhanced relative to the system disclosed by Morchand. The following is noted:

a) In Zaboklicki, the segments/fragments of the complete interactive TV programs were not limited to TV signal segment/fragments as in Morchand, but included program segments/fragments of other sources and types such as:

1. Pages of teletext data;

2. Supplemental/Auxiliary audio signal components;
  3. Locally stored video information;
  4. Etc, ...
- b) In Zaboklicki, the control information was not conveyed as mere modulations within the active image portion of the TV programming segments as in Morchant, but was conveyed as "Telesoftware" (i.e. computer software) via the pages of an embedded Teletext service;
- c) In Zaboklicki, the control circuitry was not implemented merely using dedicated circuitry as in Morchant, but was instead comprised of:
1. A teletext decoder (@ 56 of figure 3); and
  2. A software driven CPU (@ 6,7, 39, and 49 of figure 3) that was programmed, on the fly, via software (i.e. said "Telesoftware") that was downloaded to said CPU from the transmitter via pages of said Teletext service that was embedded within the VBI of the interactive programs TV signal segments/fragments;
- d) In Zaboklicki, a telephone line was utilized as a return link whereby a recorded record of a user's inputs/responses could transmitted to a remote collecting station (see figure 4).

The result being a system in which the CPU (6) of each receiver station operated, under control of the downloaded Telesoftware, to interactively select and display a sequence of the available program segments/fragments (i.e. which segments/fragments included teletext images, secondary audio signals, and multi-channel TV signals), based on the specific responses that are inputted by the respective user to thereby create, interactively, a user specific *multimedia* presentation. That is, in Zaboklicki, the downloaded Telesoftware provided the CPU with the "instruction"/script that it needed to follow in order to have identified, selected, and displayed each "next" program segment/fragment from the user's specific response to each "current" displayed segment/fragment. That is, at any branch point within the interactive program, the CPU of each Zaboklicki receiver station had to have determined where in the script it was, i.e. it must have had some way of knowing/determining "content" of the segment/fragment currently being displayed, for it to have

identified the next segment/fragment that had to be interactively selected and displayed as a result of the specific response inputted by the user; i.e. hence the described segment/fragment identifiers of the Zaboklicki disclosure.

**4) The Interactive System of U.S. Patent #4,413,281 to Thonnart:**

Thonnart also disclosed an interactive TV system. The interactive TV system disclosed by Thonnart has many similarities to the interactive system that was described by Zaboklicki. The following is noted:

- a) In Thonnart, the program segments/fragments of the complete interactive TV programs included:
  1. Pages of digital teletext data;
  2. Analog audio signals; and
  3. Analog video signal representing sequences of still video frames;
  4. Etc, ...
- b) As in Zaboklicki, in the system disclosed by Thonnart segment/fragment "identifiers" were added to segments/fragments of the interactive program to enable the receivers to identify the receipt of those which needed to be selected and displayed [note claim 1];
- c) As in Zaboklicki, in the system disclosed by Thonnart:
  1. Command logic sequences (i.e. "software") were generated at the transmitter [e.g. lines 37-46 of column 2];
  2. Said command logic sequences were downloaded to the receiver station, as part of the digital data steam, with priority over the teletext data [e.g. lines 5-13 and 25-32 of column 4];
  3. Said downloaded command logic sequences were received and stored within a logic memory (27) of the receiver stations [lines 33-40 of column 4]; and
  4. Said stored logic sequences (i.e. software/"programming") were then executed by the receiver stations to control the selection and

display of the program segments/fragments, based on the user's inputs, to generate a multimedia user specific interactive presentation [e.g. lines 41-58 of column 4; lines 37-45 of column 2; etc,...]; and

- d) In Thonnart, the digital and analog segments/fragments of the complete interactive program could be transmitted to the receiver station over respective/separate/different channels wherein, in such cases, the receiver stations would require respective/separate/different tuners so that the analog and digital segments/fragments could be received in simultaneously (i.e. in parallel) [note lines 14-24 of column 4];and
- e) In Thonnart, the page of teletext data were displayed either in sequential fashion or simultaneous fashion with respect to the video still frames (see claim 1).

**5) The Interactive System of D.E. Patent Document #2,550,624 to Haefner et al.:**

Haefner et al. also disclosed an interactive TV system. As with Zaboklicki, the receiver station circuitry was controlled by a software driven processor (@ 13 of

figure 2) which received the software from the transmitter station. However, in Haefner et al., all of the program segments/fragments of the complete interactive TV program, e.g. including the TV signal program segments/fragments, were

downloaded and stored on a random access storage medium of the receiver station in advance of the user interaction, thereby eliminating the need for (and use of) dedicated TV transmission channels as utilized in the multi-channel systems of Zaboklicki and Morchand. That is, instead of controlling the tuner of the TV receiving circuitry to tune to the respective TV program segments/fragments that were to be selected and displayed, the computer (13) in Haefner et al. controlled its receiver to retrieve the respective program segments/fragments that were to be selected and displayed from said random access memory medium.

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**E. DETAILED OFFICE ACTION:**

**E-1) THE SECTION 120 PRIORITY ISSUE:**

- a. Contrary to applicants' recent objections, it was applicants who first introduced "blanket statements" into the record alleging that many of their 328 bulk filed related applications (i.e. all claims contained therein) were entitled to the 1981 effective filing date of their 1981 parent application under section 120.
- b. In order to "prove" that these claims were entitled to the 1981 effective filing date, and to respond to section 112-1 rejections made by the Office, applicants initially alleged it was "clear" from "the law" that they only needed to show that each claim in question was supported in accordance with the requirements of section 112-1 by the disclosure of the 1981 parent specification alone. The Office was initially misled by applicants' allegation accepting it as truth.
- c. Eventually, however, the Office realized that applicant's position concerning "the law" was both erroneous and flawed. That applicants' sole reliance on the 1981 parent disclosure for addressing both section 112 rejections and section 120 priority issues might have been correct had the disclosure of their 1981 parent application not been discarded at the time the 1987 CIP was drafted and filed; i.e. had the 1981 specification been formally "incorporated" into the 1987 CIP specification of applicants' 328 bulk filed applications. But the 1981 disclosure was not formally incorporated into the 1987 CIP specification and, because it was not, the Office realized that applicants:
  - i. Could (and still cannot) rely on the 1981 specification at all for rebutting section 112 rejections because, by law, section 112 support for the claims must come from the "instant specification" on which the claims depend. The "instant specification" is the 1987 CIP specification alone being that the 1981 parent specification was never incorporated therein; and
  - ii. Could (and still cannot) rely on the 1981 specification alone to establish section 120 priority to the 1981 filing effective date for that which is claimed because each of the instant claims is only entitled to section 120 priority if it recites "common subject matter" wherein, under the present circumstances, "common subject matter" is:
    - (1) That 1987 subject matter which is described and claimed within the instant 1987 CIP specification in accordance with all of the requirements of section 112; wherein the "instant specification" is the 1987 CIP specification alone because the 1981 parent specification was not incorporated therein; and
    - (2) That **same** claimed 1987 subject matter that can be shown, by applicants', as having been previously described in the past 1981 parent specification in accordance with all of the same requirements of section 112.

d. Given this "new" realization, the Office challenged applicants' notion that "the law" allowed the section 112 rejections and the section 120 priority issue to be addressed using the 1981 parent specification alone or even at all. In response to this challenge, applicants' conceded that that section 112 rejections must be addressed using the instant 1987 CIP specification alone. With respect to the section 120 priority issue, however, applicants only conceded that some type of "dual" section 112 support from the respective 1981 and 1987 CIP disclosures was necessary, however, applicants outright refuted the position taken by the Office that this required "dual" section 112 support must be provided by any kind of "common subject matter".<sup>27</sup>

e. Then, within ones of the bulk filed applications, applicants began submitting a chart that identified "correlated" subject matter that existed between the 1981 and the 1987 specification. Applicants also began submitting claim charts for establishing alleged "dual" section 112 support for the claims from both disclosures wherein these claim charts which appeared, for the most part, to regurgitate the information that was contained in the correlation chart on a claim-by-claim, limitation-by-limitation, basis.

f. In response to these submissions, the Office pointed out that the respective "correlated" citations from the 1981 and 1987 specifications that made up applicants' charts of alleged "dual" support were quite different and did not meet the required "common subject matter"/"same invention" requirement of section 120. Applicants responded to this by arguing that section 120 does not require that the respective 1981 and 1987 disclosure being relied upon for "dual" support have anything in common other than their ability to *independently* provide some kind of section 112 support for the claims. In taking this position, it appears that applicants have confused the issue of "support" required by section 112 (as incorporated into section 120) with the issue of

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<sup>27</sup> Applicants maintains that:

"[Section] 120 does not require an applicant to demonstrate that the disclosures relied upon under 120 have anything in common besides their ability to separately comply with 112-1 with respect to the claims for which priority is sought. Accordingly, the Examiner's focus on comparing the support from the two applications for similarity or common subject matter is improper and irrelevant because all applicants are required to do is satisfy 120 is show that each disclosure meets the requirements of 112-1 for a given claim." (emphasis added)

[Page 141 of applicant's response filed on 1/28/2002 in application S.N. 08/470,571]

"Accordingly, the law requires a two part test in which the applicant separately demonstrates 112 support for each application. In the FOA, the examiner distorts this straightforward test by imposing a third element of the test whereby the 112 support from each application consists of 'common subject matter.'"

[See the last 10 lines on page 137 of the response filed on 1/28/2002 in SN 08/470,571].

The examiner disagrees:

"However, as mentioned earlier, a continuing application is entitled to rely on the earlier filing date of an earlier application only with respect to subject matter common to both applications" (emphasis added)  
[In *Transco Products, Inc., v. Performance Contracting, Inc.*, 32 USPQ2d 1077 [\*18]]

"The inquiry required by section 120 demands a comparison of 1) the claims of the parent and CIP applications and 2) any other disclosures made in the applications such as specification and drawing.  
*Acme Highway, supra, at 1079, 167,USPQ at 132-33.*"

[*Stern v. Superior Distributing Company et al.*, (CA 6), 215 USPQ 1089 at 1094]

"anticipation" that exists under section 102. That is, the fact that applicants can show that all the limitations of a given claim can be "anticipated" (in a section 102 sense) by different teachings from the respective 1981 and 1987 disclosures does not mean that the section 112 requirement of section 120 has been fulfilled. Applicants must also show that these respective anticipatory 1987 and 1981 disclosures being relied upon for proof of section 120 priority do in fact describe/define the "same invention" and therefor constitute "common subject matter" with respect to that which is claimed; i.e. that the respective descriptions are in fact legal equivalents. This would have been a straight forward exercise had the 1981 parent specification been formally incorporated into the 1987 CIP specification by reference (or at least in some immediately discernible fashion) and had the claims been drafted to derive section 112 support directly from this incorporated 1981 subject matter. But this is not the case, and given the present circumstances, attempting to identify "common subject matter" between specifications has proven to be a most unpleasant and daunting task. Fortunately for the examiner, "the law" seems "clear" that the burden of proof is applicants' in that the claims are only entitled to the 1981 effective filing date under section 120 if/when applicants can show that the claims are directed to "common subject matter" found in both the 1981 and 1987 specifications (i.e. the examiner is under no obligation to accept mere allegations or to "prove" that applicants' claims are not entitled to section 120 priority).

g. From the case law, the steps that applicants must perform to show that a given claim is entitled to the 1981 effective filing date seem straightforward enough. Namely, it appears that applicants need only to:

- i. Identify the respective 1981 and 1987 disclosures that are being relied upon for section 112-1 support of the given claim; and
- ii. Show/explain how and why the so identified 1981 and 1987 disclosures describe/define "the same invention" and therefor constitute "common subject matter" with respect to that which is claimed; i.e. why the respective 1981 and 1987 CIP descriptions are legal equivalents and, therefor, result in identical 1981 and 1987 CIP claim constructions.

In the response filed 1/9/203 in SN 08/470,571, applicants and applicants' expert both submit arguments alleging that each of the pending claims can find some kind of dual section 112 "support" in both of the respective the 1981 and the 1987 disclosures and therefor, so they conclude, the claims are entitled to the 1981 effective filing date. However, it is unclear from these arguments what "standard" of proof applicants and applicants' expert have adopted in support of their conclusions. That is, it is unclear whether applicants and their expert are alleging that the respective 1981 and 1987 disclosures being relied upon for "proof" of priority do in fact describe the "same invention" and therefor constitute "common subject matter" as is required under section 120 or, alternatively, whether applicants and their expert continue to base their arguments on the premise that "the same invention"/"common subject matter" is not a requirement of section 120 and are therefor continue to improperly base their conclusions of adequate "dual" support based on nothing more than alleged "correlated" 1981 and 1987 subject matter (i.e. based on different 1981 and 1987 subject matter that arguably "anticipates" the claims in a section 102 sense). Clarification is needed.

h. The point being that that the long standing impasse concerning the section 120 priority issue is not the result of the examiner's refusal to consider the evidence that applicants have submitted as "proof" of priority. Rather it is the result of the examiner's belief and understanding that the evidence being submitted by applicants misses the mark (given the current fact pattern). As understood by the instant examiner, merely showing that a claim is "anticipated" by respective teachings from the 1987 CIP and 1981 parent disclosures does not constitute proof that a claim is entitled to the 1981 filing date. To the contrary, the examiner believes that the respective 1987 and 1981 *anticipatory* teachings that have been cited by applicants as proof of section 120 priority seem so diverse in nature that they do not meet, or at least have not been shown to meet, the very real "same invention"/"common subject matter" requirement of section 120 (i.e. a real requirement of section 120 that applicants', to this day, continue to refute and dismiss).

The examiner maintains that there is a very real difference between:

- 1) A claim in a later filed CIP application that recites subject matter that is described in both the CIP and parent specifications; and
- 2) A claim in the later filed CIP application that has been drafted in some "quasi-generic" fashion so that it can be anticipated, arguably, by diverse CIP and parent subject matter from the CIP and parent specifications, respectively.

Namely, the examiner understands that the former claim recites "common subject matter" and is therefore entitled to priority under section 120, whereas the latter claim does not and is not.

- i) The examiner understands that applicants' claim to the 1981 priority date needs only be addressed and resolved for those claims which are properly rejected under sections 102 and 103 via intervening prior art. Thus, when applicant elects to amend the claims to overcome the intervening prior art, the section 120 priority issue becomes moot. However, in light of applicant's blanket claim to section 120 priority and the fact that these blanket claims were, and still appear to be, founded on an erroneous standard of proof, it is for clarity of record that the examiner provides corresponding "blanket" responses. It is also the reason why the examiner has made every attempt to find and properly apply intervening prior art against all of the claims of the present application (i.e. none of the "prior art" of record has been excluded from consideration against the claims of the instant application as a result of applicants' allegation that ones of their pending claims are entitled to the 1981 effective filing date).
- .....

## **SECTION 112 ISSUES:**

**E-2)** Claims 56, 80, 84 (and all claims dependent therefrom) are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

### **I. With respect to claims 56, 80, and 84 (and all claims dependent therefrom):**

1) Throughout the record, applicants' argue that the recited "locally generated" image recitations of their pending claims has, or should be given, some special meaning that avoids and/or overcomes teletext "prior art". This position is again reiterated by applicants' in their latest response of January 9, 2003 in S.N. 08/470,571:

**"Applicants have consistently argued that a locally generated image is different from a ... teletext image that is generated wholly by processing an incoming signal received from a remote source"**  
[lines 8-10 on page 83]

The following is noted:

- a) First, given the normal meaning of the term "locally" and the normal meaning of the term "generated", teletext images clearly fall within the meaning of "locally generated" images [see paragraph C-3 of this Office action]. In fact, the "prior art" of record evidences the fact that those of ordinary skill in the art explicitly recognized teletext images as having been "locally generated" [see paragraph C-3 of this Office action]. Applicants' arguments to the contrary are therefore confusing in that they clearly attempt to read some undefined "something" into the "locally generated" terminology that simply is not there. This confusion is exasperated by the fact that it is not clear from the record as to exactly what this undefined "something" is. Clarification is needed;
- b) As noted above, applicants now state that teletext images are generated at the decoder by:

**"wholly processing an incoming signal received from a remote source".**

It is not clear exactly what applicants mean by "wholly processing".

Clearly, teletext images cannot be generated at the receiver by processing the received teletext signals alone ("wholly"?). Various forms of locally stored receiver specific, i.e. and "user specific", data must be present within the receiver processed too.

That is, as addressed in paragraph C-3 above, the signal of a transmitted teletext service represents different instruction sets wherin each instruction set, when selected at a receiver/decoder, tells the selecting receiver/decoder as to how to locally generate/synthesize a respective teletext image by:

- 1) Selecting and assembling pluralities of locally stored character and graphic image fonts to generate displayable information; and
- 2) To display this displayable information according to various display attributes to create the locally generated/synthesized teletext image.

Given that the locally stored character and graphic fonts differ from receiver-to-receiver, both "content" and "appearance" of the generated teletext images also varies from receiver-to-receiver and decoder-to-decoder (i.e. evidence of the fact that the displayed teletext images are "locally generated" by processing receiver specific font data).

**"Even with standard terminals, characters look different depending on the display chips used, ..."<sup>28</sup>**

[Lines 5-7 on page 401 of the 3/1980 article "The use of MicroCobol for Telesoftware" by Sedman]

For completeness, it is also noted that the locally stored teletext page numbers that are inputted by the user of each teletext receiver/decoder, i.e. to cause the local generation and display of desired/selected teletext images at each receiver/decoder, represent another form of "user specific" and "receiver specific" data that must also be processed, along with the received teletext signal, to locally generate the desired teletext images.

Thus, in light of that which is discussed above, applicants' insistence that the recited "locally generated" image terminology should be read in some "narrowed" manner that overcomes the teletext "prior art" continues to render the recited "locally generated" image terminology of the claims indefinite:

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<sup>28</sup> (i.e. clear evidence that the teletext images were not generated "wholly" from the processing of the received teletext signal as alleged by applicants).

a) Applicant's have failed to adequately explain the rationale for their position. That is:

1. What precisely is applicants' "narrowed" definition of a "locally generated" image?
2. Where does this "narrowed" definition appear in the instant 1987 CIP specification as originally filed?
3. Exactly how does applicants' "narrowed" definition of a "locally generated" image exclude teletext images that are in fact "locally generated" within conventional teletext decoders given any normal/conventional meaning of this same "locally generated" terminology?; and

b) Applicant's position is contrary and repugnant to explicit teachings found in the "prior art" which evidence the fact that those of ordinary skill in the art, at the time of applicants' alleged invention, explicitly recognized teletext images as being "locally generated" images (e.g. see paragraph C-3 above).

**"It must be clearly held in mind that the [teletext] image displayed on the CRT is synthetic video and that the synthesis is done locally" (emphasis added)**

[The first two lines under the heading "Synthetic Video" on page 545 of the 1980 article "THE ROLE OF THE TELEVISION RECEIVER MANUFACTURER IN THE UNITED STATES" by Ciciora et al.]

**"Picture display devices of such type, have a picture screen on which a mixed picture signal can be displayed are known. By means thereof pictures can be displayed in which locally generated characters, drawing elements and similar items can be superimposed on a normal picture, for example a moving picture transmitted, for example, by a transmitter and received in a conventional manner. Such a signal can be generated by, for example, a teletext decoder in the display device" (emphasis added)**

[The first paragraph under the heading "Background of the Invention" in column 1 of US Patent #4,347,532 to Korver]

**"In a picture display device for displaying a mixed picture signal which signal comprises a conventionally received television picture signal and a locally generated signal, such as a teletext sub-title..." (emphasis added)**

[The first 6 lines in the abstract of GB 2,062,401 patent document to Korver]

**"[Videotex] data transmitted do not represent directly the picture which is generated in the receiver, but encoded instructions to the receiving decoder"** (emphasis added)

[Lines 8-10 under the heading "1-Scope" on the first page of the article "The Concept of a Universal 'Teletext' (Broadcast and Interactive Videotex) Decoder, Microprocessor Based]

**II. With respect to claim 84 (and all claims dependent therefrom):**

Claim 84 is a method claim that positively recites five steps that are performed at a transmitter station in order to:

- a) Receive a video signal, a first discrete signal, and second discrete signal;
- b) To transfer these received signals to a transmitter; and
- c) To transmit these transferred signals to at least one receiver station.

Included within the recitations of claim 84 (e.g. lines 10-18) are functional descriptions of processing that is "intended" to occur at the receiver station when the transmitted signals are received thereat. However, steps for performing this "intended" receiver side processing are never positively recited by the claim.

Thus, claim 84 is confusing and indefinite because it is not clear whether the functional descriptions of lines 10-18 are part of the recited method or whether they should be treated merely as descriptions of intended use. Clarification is required.

**III. With respect to claim 80 (and all claims dependent therefrom):**

Claim 80 is a method claim that positively recites two transmitting steps that are performed at an intermediate transmitter station. However, the recitations of claim 84 (like those of claim 80) include functional descriptions of processing that is "intended" to occur at the receiver stations based on the data that is transmitted by the two positively recited transmission steps.

Thus, claim 80 is also confusing and indefinite because it is not clear whether the noted functional descriptions are part of the recited method or whether they should be treated merely as descriptions of intended use. Clarification is required.

**E-3)** Throughout the claims, applicants recite processing steps in which information from a first discrete signal is organized “*with*” information from a second discrete signal (e.g. lines 3 and 4 of **claim 65**, lines 10-12 of **claim 84**, lines 10-12 of **claim 93**, lines 10-12 of **claim 187**). The recitations in question are very broad and clearly fail to specify:

- a) Whether the term “*with*” refers to a process in which the information from the second discrete signal is used to organize the information from the first discrete signal; or
- b) Whether the term “*with*” refers to a process in which the information from the first discrete signal and the information from the second discrete signal are merely organized along with each other.

With respect to the rejections of the claims that follow, the latter interpretation of this recitation adopted and addressed. However, for the record, the examiner notes that either of the above interpretations can be met by processing that necessarily occurred within conventional teletext decoders. For example:

- a) In conventional teletext, the pages of teletext data were transmitted as a plurality of data packets wherein each packet comprised a first discrete data signal portion and a second discrete header signal portion. At the decoder, the information from the discrete header signal portion of the packet was used to “organize” the information from the discrete data signal portion of the packet [e.g. information from the header portion of the packet synchronized the byte clock of the decoder thereby allowing the serial bits stream of the information from the data signal portion to be properly “organized” into x-bit parallel data bytes/words]; and
- b) In conventional teletext, most pages of teletext data were transmitted as a plurality of data packets. To recover the information that was needed to display a given one of the transmitted pages, page information from the respective plurality of transmitted packets had to be extracted and “organized” together to provide the complete set of display instructions that was needed to generate the displayable image.

[again, see section “c” of this Office action]

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**SECTION 102 ISSUES:**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**E-4) Claims 187 is rejected under 35 U.S.C. 102(b) as being anticipated by Ono et al. [JP 55-028691].**

**A) Preface:**

Together, Teletext and Viewdata make up Videotex, wherein:

- 1) Teletext systems represent a one-way version of videotex in which:
  - a) The entire teletext database is cyclically transmitted within the TV channels; and
  - b) The receivers operate to search, select, and display that portion (i.e. those pages) of the cyclically transmitted teletext database that are desired by the user. Teletext systems are advantageous in that they utilize existing wideband video/TV channels as their transmission path, and are disadvantageous in that much of the available bandwidth is necessarily wasted transmitted undesired portions of the database.
- 2) In contrast, Viewdata distribution systems represent a two-way/interactive version of videotex in which:
  - a) The entire Viewdata database is stored at a central server location; and
  - b) Via a telephone line, the user contacts the remote server, requests desired portions/page of videotext data, and receives the requested portion/pages from the remote server. Viewdata systems are advantageous in that none of the available bandwidth is wasted on the transmission of undesired data, and are disadvantageous in that they utilize expensive narrow band phone lines as their transmission path.

Given the known advantages and disadvantages of conventional teletext and viewdata systems, those of ordinary skill in the art at the time of applicants' alleged invention were developing *optimized* hybrid teletext/viewdata systems which imported the advantages of both teletext and viewdata systems.

**"Videotex has two distinct forms of information transmission – Teletext and Viewdata. Teletext is the transmission of textual data and graphics to a consumer adapted television set using broadcast transmission techniques. Viewdata is the interconnection of a home terminal device to a host computer via narrow band transmission facilities, such as a telephone line. Although Teletext and Viewdata display information on a consumer TV screen in similar fashion, they have managed to evolve separately. Each of the two techniques has its own advantages and disadvantages. In Teletext, data is sent as a recirculating data stream. The amount of data stream is limited only by the number of transmission scan lines available for data transmission and the predetermined acceptable latency between page**

**selection and display. Viewdata provides almost instant access to a large number of display pages with minimum access time. However, because it is similar to a timesharing service, telecommunication and computer port requirements have high associated cost burdens.**

**A new system architecture is evolving known as the hybrid configuration. In this system, the advantages of both Teletext and Viewdata can be combined to provide an optimal service."**

[Pages 14 and 15 of the article "Videotex Services via CATV – Hybrid Systems Approach" by Dages]

**B) The showing of Oono et al.:**

Oono et al. represents an example of such *optimized* "hybrid" teletext/viewdata system. Namely, the system disclosed by Oono et al.:

- 1) Corresponds to a two-way Viewdata system in that it utilizes a telephone modem (@ 10 of figure 3) which enabled the user to submit requests to a remote server for videotext data that he/she desired; and
- 2) Corresponds to a one-way Teletext system in that it utilized the VBI of broadcasted TV signals (@ "d" of figure 3) to transport packets of videotex data containing the requested portions/pages of data to the receiver stations.

**C) With respect to the claim limitations of claim 187:**

As discussed above, Oono et al. disclosed a *hybrid* videotex system. As shown in figure 3, each receiver station of the Oono et al. system was computer driven and included a switch which permitted the receiver station, under user control, to be operated in a selected one of three available display modes:

- 1) A ***video display mode*** in which the received TV video image is displayed alone (e.g. occurs when signal V3 is selected via button 16 of the remote control unit 9 of figure 4);
- 2) A ***text mode*** in which the locally produced teletext image is displayed alone (e.g. occurs when signal V1 is selected via button 14 of the remote control unit 9 of figure 4); and
- 3) A ***mixed mode*** in which the display of the locally generated teletext image is coordinated with the display of the video image to produce a combined image (e.g. occurs when signal V2 is selected via button 16 of the remote control unit 9 of figure 4). <sup>29</sup>

[e.g. lines 17-21 on page 7 of the translation]

<sup>29</sup> Teachings of this same multi-mode display feature can be found throughout the art of record [Note: lines 12-55 in column 1 of Bart et al.; lines 29-44 on page 2 of GB #1,486,424 to Turner; JP 54-154215 to Yokoyama; Switch 3 in figure 4 of U.S. Patent #3,961,137 to Hutt et al.; etc,...]

The Oono et al. system comprised:

- 1) TV receiving circuitry (1) **for receiving** an information transmission comprised of a TV signal and a plurality of discrete videotex packet signals embedded within the VBI of the TV signal;
- 2) A separating circuit (2) **for detecting** and separating the discrete videotex packet signals from the TV signal;
- 3) A conductor **for passing** the detected discrete videotex packet signals to at least one processor (3);
- 4) Circuitry including RAM (4) **for organizing** information obtained from a plurality of the passed discrete videotex packet signals (e.g. first, second, third, etc,...) into a complete videotex image;<sup>30</sup>
- 6) Circuitry, within the processor, which stores user specific subscriber datum corresponding to the receiver station's/terminal's address;
- 5) A user input device (9) **for supplying** information by a user of the receiver station (i.e. the user keys in the information), e.g. the user's request, **which must be stored and processed** by the processor (3) before ("prior to") the data can be organized into a complete videotex image [i.e. the videotex page must be requested by the user before the data corresponding to said requested page can be received and organized];
- 6) Circuitry (@ 3, 4) **for generating** the videotext image by processing the stored user specific subscriber datum that is "based on"/"by processing" the information entered by the user via input device (9); and
- 7) Display circuitry (not shown), including a switch (5), for producing a presentation comprised of a video image (@ V3), a videotex image (@ V1); and a combined videotex/video image (@ V2).

*[Here it is noted that any time videotex data was superimposed/overlaid over the video component of a received TV signal, it was done so in a synchronized (i.e. "coordinated") fashion. If this were not the case, differences in horizontal and vertical display*

<sup>30</sup> This is an implicit feature of videotext transmission (note paragraphs "C-2" and "C-3" of this Office action). That is, as was well known in the videotex art, the limited bandwidth of a horizontal line in the VBI of TV signal meant that even the shortest of videotex messages had to be conveyed as a multiple of videotext data packets embedded, respectively, in a multiple of said horizontal line intervals. Such is implicitly true of the videotex data that is conveyed in Oono et al. too (e.g. be it the software data, the refresh data, or the superimposed data).

*frequencies would cause the videotex images to "roll" on the display screen whereas differences in horizontal and vertical display phase would cause the videotext images to be displayed with an arbitrary phase. In Oono et al., the fact the videotex images are displayed in such a "coordinated" fashion is expressly indicated by the fact that the "H" and "V" sync signal are being provided to display RAM 4 of figure 3].*

**E-5) Claims 188, 189, 191, 192, 193, 194, 195, 196, and 197 are rejected under 35 U.S.C. 102(b) as being anticipated by Oono et al. [JP 55-028691] for the same reason that were set forth for claim 187 above. Additionally, the following is noted:**

- 1) With respect to claims 188 and 189, it is noted that the recited "third discrete signal" has not been related back to the "information transmission" and therefore broadly reads on the TV channel selecting device in Oono et al. (e.g. 9 of figure 4) which generate discrete channel selection signals for selecting the TV presentation that is to be received/presented.
- 2) With respect to claims 191 and 192, it is noted that the recited "user specific subscriber datum" broadly reads on each receiver's terminal address which is both stored locally within the receiver and broadcasted within the packets; i.e. when the address data of a received packet is equal to the terminal's stored address (via comparison) the receiver knows that the packet has been transmitted to it.
- 3) With respect to claim 193, it is noted that the recited "third discrete signal" can be read on "software" that drives CPU (@ 9) and that the "receiver specific control signal" reads on the channel selection signals provided by input device (@ 9).
- 4) With respect to claim 194, it is noted that the recited "third discrete signal" can be read on "software" that drives CPU (@ 9) and that the "receiver specific control signal" reads on the videotex page selection signals provided by input device (@ 9).

**E-6) Claim 93 is rejected under 35 U.S.C. 102(b) as being anticipated by Oono et al. [JP 55-028691] for the same reason that were set forth for claim 187 above.**

**E-7) Claims 94, 95, 100, 102, 103, and 106-109 are rejected under 35 U.S.C. 102(b) as being anticipated by Oono et al. [JP 55-028691] for the same reason that were set forth for claim 93 above. With respect to the specific recitations contained therein, see paragraph E-5 of this Office action.**

**E-8) Claim 56 is rejected under 35 U.S.C. 102(b) as being anticipated by Oono et al. [JP 55-028691] for the same reason that were set forth for claim 187 above; e.g.**

In Oono et al.:

- a) The CPU (@ 3 of figure 3) received user specific data from the input device (@ 9) representing user specific inputs;
- b) The CPU (@ 3 of figure 3) then contacted a remote data source via the telephone modem (@ 10) when the user specific data represented a request for videotext information;
- c) The receiver (@ figure 3) then receives a broadcasted TV signal ("d") and separates (@ 2) the discrete packets of videotex data (@ figures 1 and 2) embedded therein, wherein portions of these received packets contain the videotext data which will serve "as a basis" for "generating" the videotex portion of a combined image presentation whenever switch (5) is configured to select the "mixed" image display mode (i.e. to select signal "V2" via the actuation of a button by the user of a button (15 of figure 4) on the user input device (@ figure 4));
- d) The CPU (@ 3 of figure 3) which, by executing control software therein, processes the received videotex data and the user entered information to cause the "local generation" of a videotext image which is stored in a local memory (@ 4 of figure 3); and
- e) Outputting circuitry (e.g @ 7 and 5 of figure 3) for providing a combined and "coordinated" videotex/TV display presentation whenever the "mixed" display mode signal (V2) has been selected for output via the actuation of button (15) of input device (9).

**E-9) Claims 57, 58, 60-63, 65, 66, 67-72, and 74 are rejected under 35 U.S.C. 102(b) as being anticipated by Oono et al. [JP 55-028691] for the same reason that were set forth for claim 56 above. Additionally, the following is noted:**

- 1) With respect to the recitations of claim 57, it is noted that CPU (3) is a software driven device and therefor must be programmed with the software that drives it;
- 2) With respect to the recitations of claims 58 and 71, it is noted: that CPU (3) is a software driven device and therefor must be programmed with the software that drives it; and that the videotex data inherently comprised various "instruct signals" which caused the CPU (3) to execute the specific portions of the software pertaining to the generation/display of the videotext data contained therein [e.g. Note section "C" of this Office action and, more specifically, paragraph "C-3" contained therein];
- 3) With respect to the recitations of claims 60-62, it is noted that the videotex packets and videotex data that are received and processed by the receivers themselves contain host of different "identifiers" that must be processed by the receiver/CPU [e.g. terminal identifiers, page identifiers, data type identifiers, etc,... (note figure 2)];
- 4) With respect to the recitations of claim 63, it is noted that the videotex channel represents an explicit first digital channel, and that the telephone modem/channel represents an implicit second digital channel for providing two-way /interactive communications between the receivers and the remote TV/Videotex transmitting cite.
- 5) With respect to the recitations of claims 65 and 66, it is noted that the recited processing/organizing of first and second discrete signals: reads on the processing of videotext data packets (see paragraph "C-2" of this Office action); and/or reads on the processing of software by CPU (3) which software is itself, inherently, made up of discrete signals/words/instructions which must be organized and executed.
- 6) The examiner notes that the recitations of claim 67-72 are met when the "television program" terminology is broadly read in accordance with the instant 1987 CIP specification's definition of "programming" so as to encompass videotex-type "programs" too.

7) With respect to the recitations of claim 74, it is noted that input device (@ 9 of figures 3 and 4) inputs many instructions/commands that must be processed by the software driven CPU (@ 3).

**SECTION 103 ISSUES:**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**E-10) Claims 73 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oono et al. [JP 55-028691], for the reason that were set forth for claim 56 above, in view of Zworykin [US #2,757,226].**

Claim 73 differs from the showing of Oono et al. only in that Oono et al. did not describe the TV programming as having been scrambled.

Zworykin has been cited to evidence the fact that it was notoriously well known in the TV distribution arts to have scrambled certain TV signals so to have prevented unauthorized reception by unauthorized viewers (i.e. those who have not paid for the programming).

It would have been obvious to one of ordinary skill in the art to have utilized the convention TV distribution network described in Oono et al to have distributed conventional TV programming on a subscription basis given the fact that advertising revenues were not always adequate to pay for the cost of the TV programming [e.g. see lines 21-31 of column 1 in Zworykin]. In such situations it was known to have been desirable, if not necessary, to have scrambled the TV programming to prevent unauthorized use/reception by people who have not subscribed [e.g. lines 15-68 of column 1 in Zworykin ].

**E-11) Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over: The 1980 article entitled "Telesoftware-Value Added Teletext" by Hedger et al. in view of:**

- 1) The 1980 article "The Use of MicroCobol for Telesoftware" by Sedman; and**
- 2) Either one of Yoshino et al. [GB 1,405,141] or Bart et al. [US #4,213,698].**

**I. The claimed invention (as disclosed):**

Claim 56 appears to be directed to the described "WALL STREET WEEK" application of applicants' instant 1987 disclosure in which the receiver station, under software control, operates:

- 1) To receive user specific information pertaining to the user's stock portfolio;
- 2) Contact a remote data source to obtain the latest stock prices for the stocks of the user's stock portfolio;
- 3) Utilizes the stock portfolio information and the obtained stock prices to locally generate an image representing the performance of the porfolio; and
- 4) To simultaneously display the locally generated image on a TV receiver with video information of a received TV program.

Significantly, claim 56 does not recite that the locally generated image is related to the TV programming nor does it recite that the locally generated image is displayed at the respective stations in "common" synchronism with the TV programming.

**II. The showing of Hedger et al.:**

As is shown in figure 1 on page 557, Hedger et al. discloses a TV receiver which includes a computer (e.g. the illustrated "microcomputer") for receiving and running downloaded computer software (e.g. "Telesoftware"). Hedger et al.

recognized that the "Telesoftware" could be downloaded to the TV receiver using conventional videotex data transmission: i.e. Dial-up networks (e.g. viewdata); and TV broadcast networks (e.g. teletext). As to applications, Hedger et al. describes a configuration in which the downloaded "Telesoftware" enabled the computer implemented TV receiver to:

- 1) Receive user specific stock portfolio information from a local data source (e.g. a cassette recorder);
- 2) To utilize received user specific stock portfolio information, after the step of receiving, to access broadcasted teletext pages to obtain remotely originated data representing the latest stock prices; and
- 3) To use the user specific stock portfolio information and the obtained remotely originated data to calculate, via the execution of the downloaded "Telesoftware", the rise (or fall) in the value of the user's portfolio which is, inherently, displayed to the user via the TV receiver in the form of a locally generated image.

**"Alternatively, by making the details of his shares portfolio known to the telesoftware program (possibly by loading it from a cassette recorder) the viewer could then use the program to access the stock market pages of teletext and compute the rise (or fall) in the value of the portfolio".**

[Lines 11-20 in the second column on page 564 of the Hedger et al. publication]

### III. Differences:

The examiner maintains that claim 56 differs from the showing of Hedger et al. only in that claim 56:

- 1) Requires that a remote data source be "contacted" to obtain the remotely originated data (i.e. the latest stock prices); and
- 2) Requires that the locally generated image be displayed simultaneously with the video component of a received TV signal.

### IV. State of the art:

"Videotex" was known to have comprised two distinct types of systems: One-way teletext systems; and two-way viewdata systems.

**"Videotex has two distinct forms of information transmission - Teletext and Viewdata. Teletext is the transmission of textual data and graphics to a consumer adapted television set using broadcast**

**transmission techniques. Viewdata is the interconnection of a home terminal device to a host computer via narrow band transmission facilities, such as a telephone line.**

**Although Teletext and Viewdata display information on a consumer TV screen in similar fashion, they have managed to evolve separately. Each of the two techniques has its own advantages and disadvantages. In Teletext, data is sent as a recirculating data stream. The amount of data stream is limited only by the number of transmission scan lines available for data transmission and the predetermined acceptable latency between page selection and display. Viewdata provides almost instant access to a large number of display pages with minimum access time. However, because it is similar to a timesharing service, telecommunication and computer port requirements have high associated cost burdens."**

[Pages 14 and 15 of the article "Videotex Services via CATV – Hybrid Systems Approach" by Dages]

#### **V. Obviousness:**

1) Wherein, Hedger et al. utilized the one-way teletext form of Videotex to obtain the latest stock prices from a remote teletext data source, Sedman explicitly evidenced that it was a known alternative to have obtained the latest stock prices from a remote viewdata data source utilizing the two-way viewdata form of Videotex.

**"Much of the data that is already on Prestel would be of greater value if it were possible to perform calculations directly on it. For example, it would be possible to calculate the current value of a portfolio of shares by accessing the stock exchange prices of each".**

[Lines 18-22 on page 406 of Sedman]

Being such, it would have been obvious to one of ordinary skill in the art to have modified the application disclosed by Hedger et al. so as to have obtain the required stock prices by "contacting" to a remote viewdata source, instead of from broadcasted teletext pages; again, being that-

- a) Sedman evidenced such to have been a known and obvious alternative; and
- b) That "teletext" and "viewdata" were known to have merely been different forms of "Videotext" transmission.

2) Bart et al. and Yoshino et al. each evidence the fact that it was known to have been advantageous to have displayed computer generated data on a TV receiver

as an overlay/inset to the displayed video component of received TV programming thereby avoiding the need to interrupt the viewing of the TV programming when viewing outputs from the computer [SEE: Lines 1-27 of column 1 and lines 54-65 of column 10 in Bart et al.; or Lines 68-80 and 110-113 on page 4 of Yoshino et al.]

Wherein, Hedger et al. did not describe the way in which the "microcomputer" of figure 3 was to have displayed its calculations at the TV receiver, having displayed the calculation as an overlay/inset to received TV programming would have been obvious in light of the teachings of either Bart et al. or Yoshino et al. given the known advantages offered thereby.

**E-12) claims 57,58, 60-63, 65, 66, 73 and 89-91 are rejected under 35 U.S.C. 103(a) as being unpatentable over: The 1980 article entitled "Telesoftware-Value Added Teletext" by Hedger et al. in view of:**

- 1) The 1980 article "The Use of MicroCobol for Telesoftware" by Sedman; and**
- 2) Either one of Yoshino et al. [GB 1,405,141] or Bart et al. [US #4,213,698],**

**for the same reason that was set forth for claim 56 above. The following is noted:**

- 1) With respect to claim 57, it is noted that the microcomputer of Hedger et al. is programming via downloaded "Telesoftware";
- 2) With respect to claim 58, it is noted that some type of instruction must be given to the microcomputer of Hedger et al. to cause the downloaded "Telesoftware" to be executed to calculate the value of the portfolio; i.e. certainly the calculation is not performed randomly at some arbitrary time.
- 3) With respect to claims 60-62, it is noted that the receiver must receive and process many types of identifiers in order to perform the described operations, such as: identifiers identifying the types of stocks owned in the portfolio; a TV channel selection identifier for causing the tuner of the TV receiver to select the TV programming that is to be viewed; page and packet identifiers for identifying the data transmitted to the receiver from the remote source, etc,...

- 4) With respect to claim 63, it is noted that Videotex data is necessarily conveyed via a digital channel.
- 5) With respect to claims 65 and 66, it is noted that the downloaded "Telesoftware" in Hedger et al. inherently comprised discrete signals which had to be received and organized by the microcomputer prior to execution thereof;
- 6) With respect to claim 73, it would have been obvious for the TV programming that is displayed on the TV receiver in Hedger et al. to have been from a conventional subscription-type TV signal source requiring decryption.

**E-13) claim 93 is rejected under 35 U.S.C. 103(a) as being unpatentable over: The 1980 article entitled "Telesoftware-Value Added Teletext" by Hedger et al. in view of:**

- 1) The 1980 article "The Use of MicroCobol for Telesoftware" by Sedman; and**
- 2) Either one of Yoshino et al. [GB 1,405,141] or Bart et al. [US #4,213,698],**

**for the same reason that was set forth for claims 57,58, 60-63, 65, 66, 73, and 89-91 above. The following is noted:**

- 1) Again, the examiner notes that the "Telesoftware" described in Hedger et al. inherently comprised various types of "discrete signals" which had to be "organized" at the receiver to obtain a complete set of instructions (i.e. the complete computer program) which could be run by the computer of the receiver. For example, the "Telesoftware" in Hedger et al. was conveyed using the "discrete" packet structure of standard Videotex; i.e. SEE:
  - a) Lines 2-8 and 26-33 in the first column on page 561 of Hedger et al.;
  - b) Lines 1-6 in the first column on page 562 of Hedger et al.;
  - c) The discussion under the headings "THE TELESOFTWARE RECEIVER" and "THE PROGRAMS" which appear/begin on page 562 of Hedger et al.; and
  - d) Paragraphs "C-1", "C-2" and "C-3" of this Office action.

Given the above, when receiving the described "Telesoftware", the receiver of Hedger et al. necessarily included:

- a) Receiving circuitry (e.g. an antenna and/or tuner) for receiving a transmission transmission containing the Videotex page or pages which represented the desired "Telesoftware", wherein the "page" or "pages" comprised pluralities of "discrete Videotex packet signal";
  - b) Separating circuitry (e.g. slicing circuitry) for detecting and separating the discrete Videotext packet signals from the received transmission;
  - c) Selection circuitry for detecting and passing those discrete Videotext packet signal which comprise the Videotex page/pages that carry the desired "Telesoftware";
  - d) The "computer" which, utilizing its "resident control program" (see page 562 of Hedger et al.), organized the separated discrete packets of video information into an "organized" computer program that can be run/executed by said computer.
- 2) Any time locally generated image data is overlaid/inset into a displayed video signal, the timing of output/display must be "coordinated" with the raster scanning of the displayed video signal; i.e. the output of the locally generated image must be locked to the timing of the horizontal and vertical display frequency of the video. For if the image was not locked to the frequency of the video, the overlaid/inset image data would "roll".

Here it is noted the horizontal and vertical sync signals of the received video signal inherently constitute timing "control signals" which drive the raster scan circuitry of the TV display device and to which the locally generated overlay/inset data must necessarily be "locked" thereby producing a the "coordinated" multimedia presentation.

**E-14) claims 94, 95, 98, 100, 102, 103, 106-109, and 187-197 are rejected under 35 U.S.C. 103(a) as being unpatentable over: The 1980 article entitled “Telesoftware-Value Added Teletext” by Hedger et al. in view of:**

- 1) The 1980 article “The Use of MicroCobol for Telesoftware” by Sedman; and**
- 2) Either one of Yoshino et al. [GB 1,405,141] or Bart et al. [US #4,213,698],**

**for the same reason that was set forth for claim 93 above.**

**E-15) Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kirschner et al. [US Patent #4,253,157] in view of Bart et al. [US Patent #4,218,698].**

1) As is shown in figure 1, Kirschner et al. is illustrative of a conventional viewdata-type system which enables interactive video terminals (e.g. @ 10a-10n) to have controlled access to data within at least one remote database (e.g. @ 20) by contacting the remote database via an intermediate telephone system (e.g. @ 18). Each of the interactive terminals in Kirschner et al., e.g. shown in figure 2, represents a "video apparatus" that operates:

a) To **receive**, during one or more initialization processes, "user specific data" that is stored within the memory (@ 44 and/or 46) of at least one of a plurality of possible user/receiver specific application modules.

[NOTE: lines 55-62 of column 2; lines 11-15 of column 4; lines 35-39 of column 4; and lines 4-36 of column 7];

b) To **contact** a remote data source (20) wherein the remote data source is contacted after the initialization process in which said "user specific data" was received.

[NOTE lines 32-68 of column 7 and lines 1-12 of column 8]

c) To **receive** from the remote data source, as a result of said contact, remotely originated data representative of a specific "closed loop file".

[NOTE lines 38-60 of column 8]

d) To **execute** processing instructions to process said remotely originated data and said user specific data at the terminal location in order to locally generate a text/graphics image for output to television receiver (12). That is, by executing local software, each terminal locally processes the remotely originated data that is being received, along with the locally stored user specific data, in order to select and store that portion of the remotely originated data that is needed to locally generate the text/graphics image output.

[NOTE: lines 61-68 of column 8; and lines 5-12 of column 9].

2) Claim 56 differs from the showing of Kirschner et al. only in that the television receivers (12) in Kirschner et al. was not explicitly described as having operated, or at least been operable, to have displayed the locally generated text/graphics image over conventionally received TV signal broadcasts.<sup>31</sup>

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<sup>31</sup> Claim 56 only requires that the two signals be displayed "simultaneously" (i.e. it does not require the content of the two signals to be related in any way).

3) Bart et al. has been cited because as evidencing the fact that it was well known in the art to have configured conventional TV receivers so as to have operated in a plurality of user selectable display modes; i.e.

- a) A television display mode in which received TV broadcast video is displayed alone;
- b) A text/graphics display mode in which locally generated text/graphic images are displayed alone; and
- c) A mixed display mode in which the locally generated text/graphic images and the received TV broadcast video are displayed simultaneously by overlaying the text/graphic images on top of the TV video.

[NOTE: lines 12-18 of column 1].

The "mixed display mode" was a known and desirable capability in the videotext display art because it enabled the user to access videotext data while watching conventional TV programming thereby ensuring that the user would not miss TV programming of interest (e.g. important news stories) while receiving and displaying videotex data.<sup>32</sup>

4) In view of the above, the examiner maintains that it would have been obvious to one of ordinary skill in the art to have implemented the TV receivers (12) in Kirschner et al. so as to have the conventional multi-display configuration described in Bart et al.; thereby enabling the receivers to be operated in the described "mixed" display mode. Such a modification was advantageous in that it prevented the users from missing TV programming of interest when accessing the data from the remote database (@ 20).

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<sup>32</sup> Applicants have alleged that this notoriously well known "mixed" display mode of the prior art pertains only to the display of broadcasted teletext data and not to the display of telephone supplied Viewdata [e.g. note lines 4-23 on page 105 of the response filed 1/9/2003 in 08/470,571]. The examiner maintains that applicants' position is erroneous and attempts to establish an unrealistically low level of skill in the videotex art for reasons that are fully addressed in paragraph "C-5" of this Office action.

**E-16) claims 57, 58, 60-63, 65-74, and 89-91 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirschner et al. [US Patent #4,253,157] in view of Bart et al. [US Patent #4,218,698] for the same reasons that were set forth for claim 56 above. The following is noted:**

- 1) With respect to the limitations of claim 57, it is noted that the terminal described in Kirschner et al. was in fact programmed to perform each of the recited steps.
- 2) With respect to the limitations of claim 58, 70, 71, and 74, it is noted that the recited "instruction signal" limitations read on signaling that was provided from keyboard (41) in figure 2 of Kirschner et al. as the result of the user's inputs/selections.
- 3) With respect to the limitations of claim 60 and 61, it is noted that the terminal described in Kirschner et al. processed many "identifiers" (e.g. data segment identifiers, the terminal identifier, subscription identifiers, etc,...).
- 4) With respect to the limitations of claim 62, it is noted that the terminal described in Kirschner et al. processed many "identifiers" at least one of which includes a "communications resource identifier" that was provided to the terminal from the remote data source (e.g. lines 5-25 of column 7).
- 5) With respect to the limitations of claim 63, it is noted that the phone line in Kirschner et al. obviously, if not inherently, acts as a digital information channel (e.g. lines 24-28 of column 4).
- 6) With respect to the limitations of claims 65 and 66, it is noted that various discrete computer subroutines (i.e. digital signals) are "organized" together under the control of the terminal's computer/processor in order to create the computer program (i.e. the organized signal) that runs the terminal's computer/processor (e.g. lines 36-43 in column 4 of Kirschner et al.). Additionally, the various types of data that are being processed by the so programmed "computer" in each terminal also comprise various forms of organized discrete signalling (e.g. figures 3-6 of Kirschner et al.).
- 7) Throughout the present prosecution applicant has alleged that the term "television programming" covers all forms of television information. Given such a broad interpretation, the described optional storing of the data from the remote data source in Kirschner et al., e.g. for later access and display, meets the limitations of claims 67, 68, and 70 (note lines 38-45 of column 9).

8) It is noted that neither the applied prior art of Kirschner et al. nor the applied prior art of Bart et al. indicates that the conventional TV signal being received and displayed comprised a video signaling that had been transmitted in encrypted format. However, the examiner notes that it was notoriously well known in the art for the video signal that was displayed by a conventional receiver to have been provided to the receiver an encrypted format. Specifically, CATV, pay-TV, and satellite TV providers commonly encrypted the TV programming that was provided to their subscribers in order to prevent unauthorized use and/or interception. The examiner maintains that it would have been obvious to one of ordinary skill in the art for the video signal that was received by the modified system of the applied prior art to have been received from such as a conventional CATV, pay-TV, and satellite TV service provider.

9) With respect to claim 89 and 90, it is noted that whenever teletext/captioning is overlaid onto a video image in the "mixed mode" it only replaces part of the video image;

10) With respect to claim 91, it is noted that the audio portion of TV programming often "explains" the action that is taking place in the video portion [i.e. news stories for example]. Obviously, the locally generated captioning pertaining to the audio portion of the programming would be displayed simultaneously with the audio with which it is related (i.e. being that the ability to synchronize different levels of captioning with the same audio component of the TV program is the reason why Mode II captioning was provided in the first place).

**E-17) Claims 187, 195, and 196 are rejected under 35 U.S.C. 103(a) as being unpatentable over Betts [GB 1,556,366] in view of Bart et al. [U.S. #4,218,698].**

**I. The showing of Betts:**

As is shown in figure 1, Betts discloses a conventional computer controlled teletext decoder which comprises:

- 1) TV receiving circuitry (7,2) **for receiving** an information transmission comprised of a TV signal and a plurality of discrete teletext packet signal embedded within the VBI of the TV signal;
- 2) A slicing circuit (8) **for detecting** and separating the discrete teletext packet signal from the TV signal;
- 3) Circuitry (11) **for passing** the detected discrete teletext packet signals to at least one processor (13);
- 4) A RAM (15) **for organizing** coded data obtained from a plurality of the passed discrete teletext packet signals (e.g. first, second, third, etc,...) into a "page" of data;
- 5) A user input device (21) **for supplying** information by a user of the receiver station (i.e. the user keys in the information), wherein the supplied information is used to generate at least one user specific subscriber datum, e.g. a user selected teletext page number, **which must be stored and processed** by the processor (13) before ("prior to") the coded data can be organized into a page of data [i.e. the page must be selected by the user before the data corresponding to said selected page can be received and organized];
- 6) Circuitry (@ 13;15, 18, 19,20) **for generating** a teletext image by processing the stored user specific subscriber datum that is "based on" the information entered by the user via input device (21); and
- 7) Display circuitry (1), including a switch (3), for producing a presentation comprised of a video image (from element 2) and the teletext image (from element 20).

**II. Differences:**

The claims differ from the showing of Betts only in that Betts does not explicitly described the operation of switch (3) as operating to provide a "mixed mode" operation in which the display of the teletext image from element "20" **is coordinated** with the display of the video image from element "7" to produce a combined image presentation.

**III. Obviousness:**

1) It was notoriously well known in the television display art to have provided switching circuitry within the TV receiving/display devices so as to offer/enable three different display modes:

- 1) A ***video display mode*** in which the received TV video image is displayed alone;
- 2) A ***text mode*** in which the locally produced teletext image is displayed alone; and
- 3) A ***mixed mode*** in which the display of the locally generated teletext image is coordinated with the display of the video image to produce a combined image

The "prior art" of Bart et al. has been cited as exemplifying this notoriously well known feature [e.g. see lines 12-55 in column 1] <sup>33</sup>

The noted "mixed mode" was known to have been both a desirable and advantageous feature in the TV display art in that it allowed the user to view received text data (e.g. teletext pages) while viewing/displaying TV programming, thereby ensuring that the user does not miss content of the TV programming during the display of text.

It would have been obvious to one of ordinary skill in the art to configure the switch (3) in Betts to provide the three notoriously well known display modes that were discussed in Bart et al. thereby enabling the Betts receiver to operate, advantageously, in the mixed display mode.

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<sup>33</sup> Teachings of this same display feature can be found throughout the videotex art of record [Note: lines 29-44 on page 2 of GB #1,486,424 to Turner; JP 54-154215 to Yokoyama; Switch 5 in figure 5 of JP #55-028691 to Ono et al.; Switch 3 in figure 4 of U.S. Patent #3,961,137 to Hutt et al.; etc,...]

**E-18) claims 187, 195, and 196 are rejected under 35 U.S.C. 103(a) as being unpatentable over figure 2 of the 1976 article "TELETEXT RECEIVER LSI DATA ACQUISITION AND CONTROL" by Crowther et al. in view of Bart et al. [U.S. #4,218,698].**

**I. The showing of Crowther et al. article:**

The examiner notes that system shown in figure 2 of the cited article corresponds to the circuitry shown in figure 1 of the Betts patent publication [GB 1,556,366] addressed in the previous rejection with the exception that the "processor" in the publication comprises dedicated "DATA ACQUISITION" circuitry [see figure 2] whereas the

"processor" of Betts comprised a software driven CPU (13). Being such, the cited article discloses a conventional teletext decoder which comprises:

- 1) An antenna (not shown in figure 2) **for receiving** an information transmission comprised of a TV signal and a plurality of discrete teletext packet signal embedded within the VBI of the TV signal [i.e. the illustrated "Video Input"];
- 2) A slicing circuit ("DATA SLICER") **for detecting** and separating the discrete teletext packet signal from the TV signal;
- 3) A transmission line (@ "D") **for passing** the detected discrete teletext packet signals to at least one processor (the illustrated "DATA ACQUISITION" circuitry);
- 4) A RAM ("MEMORY") **for organizing** coded data obtained from a plurality of the passed discrete teletext packet signals (e.g. first, second, third, etc,...) into a "page" of data;
- 5) A user input device ("KEYBOARD") **for supplying** information by a user of the receiver station (i.e. the user keys in the information), wherein the supplied information is used to generate at least one user specific subscriber datum, e.g. a user selected teletext page number, **which must be stored and processed** by the processor (@ "CONTROL CCTS.") before ("prior to") the coded data can be organized into a page of data [i.e. the page must be selected by the user before the data corresponding to said selected page can be received and organized];
- 6) Circuitry (e.g. the illustrated "SIGNAL ACQUISITION", "MEMORY", and "DISPLAY" circuitry) **for generating** a teletext image by processing the stored user specific subscriber datum that is "based on" the information entered by the user via input device; and
- 7) Display circuitry (not shown in figure 2) for outputting a presentation comprised of the teletext image (from the "OUTPUT BUFFERS").

**II. Differences:**

The claims differ from the showing of the cited publication only in that figure 2 of the cited article illustrate how the locally generated teletext image (from the "OUTPUT BUFFERS") was displayed.

**III. Obviousness:**

1) It was notoriously well known in the television display art to have provided switching circuitry within the TV receiving/display devices so as to offer/enable three different display modes:

- 1) A ***video display mode*** in which the received TV video image is displayed alone;
- 2) A ***text mode*** in which the locally produced teletext image is displayed alone; and
- 3) A ***mixed mode*** in which the display of the locally generated teletext image is coordinated with the display of the video image to produce a combined image

The "prior art" of Bart et al. has been cited as exemplifying this notoriously well known feature [e.g. see lines 12-55 in column 1]<sup>34</sup>

The noted "mixed mode" was known to have been both a desirable and advantageous feature in the TV display art in that it allowed the user to view received text data (e.g. teletext pages) while viewing/displaying TV programming, thereby ensuring that the user does not miss content of the TV programming during the display of text.

It would have been obvious to one of ordinary skill in the art to configure the to have configured the display device in figure 2 of the cited Crowther et al. article to provide the three notoriously well known display modes that were discussed in Bart et al. thereby enabling the Crowther et al. receiver to operate, advantageously, in the mixed display mode.

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<sup>34</sup> Teachings of this feature can be found throughout the art of record [Note: lines 29-44 on page 2 of GB #1,486,424 to Turner; JP 54-154215 to Yokoyama; Switch 5 in figure 5 of JP #55-028691 to Oono et al.; Switch 3 in figure 4 of U.S. Patent #3,961,137 to Hutt et al.; etc,...]

**E-19) Claim 84 is rejected under 35 U.S.C. 103(a) as being unpatentable over Millar et al. [GB #1,370,535] in view of Marti et al. [US #4,290,062].**

**I. Preface:**

It is noted that claim 84 is a method claim that:

- a) Positively recites five steps that are performed at a transmitter station; and
- b) Includes (@ lines 10-18) a functional description as to how the transmitted discrete signals are "intended" to be processed at at least one receiver station.

[see part "II" of paragraph "E-2" of this Office action]

**II. As to the five steps that are positively recited in claim 84:**

Millar et al. has been cited as exemplifying a conventional teletext transmission system structure which, as represented in the figures, comprised:

- a) A transmitter station (figure 1); and
- b) A plurality of receiving stations (figures 2 and 3).

As illustrated, the transmitter station of figure 1 included:

- a) The illustrated adder (@ "+") **for receiving**, e.g. from a video signal source (not illustrated), a video signal input (@ "VIDEO");
- b) The illustrated adder (@ "+") **for delivering** the received video signal (@ VIDEO) to a transmitter (not shown);
- c) The illustrated adder (@ "+") **for receiving**, e.g. from a teletext service source (@ "52"), pluralities of discrete teletext packet signals representing "pages" of teletext data (@ "SYNCHRONOUS DATA");
- d) The illustrated adder (@ "+") **for delivering** the received discrete teletext packet signals (@ "SYNCHRONOUS DATA") to said transmitter (not shown); and
- d) Said transmitter (not shown) **for transmitting** a combined signal (@ "VIDEO + DATA") provided by said adder (@ "+") to ones of the receiver stations of figures 2 and 3, wherein the combines signal comprises the

received video signal (@ "VIDEO") and the received pluralities of teletext packet signals.

### **III. As to the functional descriptions of claim 84:**

Figure 3 of Millar et al. provided a broad illustration of conventions teletext receiver structure. Figures 1 and 7 of Marti et al., quite obviously, provide a more detailed illustration of the same teletext receiver structure. That is:

- a) Figure 3 of Millar et al. broadly illustrates a block labeled "PAGE SELECTOR" (58) for providing a page selection process (i.e. as does figure 1 of Marti et al. @ 17), however the more detailed showing of figure 7 of Marti et al. evidences that this page selection process included:
  - 1) A "step" in which the user inputs/**supplies** information into an input device (@ 19) for identifying the desired teletext page to be received; and
  - 2) A "step" in which this **supplied information was used as the basis** for generating (@ 19) digital code representing the user's selected page number (i.e. "**user specific information**");
  - 3) A "step" in which said digital code (i.e. said "user specific information") is held/**stored** in memory (@ 57);
  - 4) A "step" in which the stored digital code (i.e. said "user specific information") was utilized (e.g. @ 56) to detect the reception of those discrete teletext packet signals which carry information pertaining to the desired teletext page;
- b) Figure 3 of Millar et al. broadly illustrates a block labeled "PAGE STORE" (59) into which information from a first ones of the received discrete teletext data packets of the selected page is "**organized with**" information from subsequently received discrete teletext data packets of the selected page to obtain an entire "page" of information; and
- c) Figure 3 of Millar et al. broadly illustrates a block labeled "CHARACTER GENERATOR" (56) which receives the "**organized information**" read from page store and is "instructed" thereby to assemble displayable picture data, i.e. that is derived from a ROM located therein, so as to locally generate/synthesize a user specific teletext image corresponding to the user selected teletext page;

wherein, as was notoriously well known in the art<sup>35</sup>, the so locally generated/synthesized teletext image was displayed either "*in coordination with*" the video signal (i.e. superimposed as an overlay over the video) or without coordination with said video signal (i.e. alone) [e.g. note lines 9-16 on page 1 of Millar et al.].

**E-20) claims 85, 87, 183-186, are are rejected under 35 U.S.C. 103(a) as being unpatentable over Millar et al. [GB #1,370,535] in view of Marti et al. [US #4,290,062] for the same reason that was explained for claim 84 above. The following is also noted:**

- 1) With respect to claim 85, it is noted that all of the discrete signal of Millar et al. were embedded in the VBI of the video signal;
- 2) With respect to claim 87, the examiner maintains that it would have been obvious for the video signal in Millar et al. to have been a conventional subscription TV signa therefor requiring encryption as was notoriously well known in the art at the time of applicant's alleged invention;<sup>36</sup>
- 3) With respect to claim 183, it is noted that various discrete control signals are necessarily received and organized by a computer @ 52 of figure 1 in Millar et al. in order to generate the control signal needed to organize and transmit the packets of the teletext pages in proper order and at proper times [e.g. note lines 23-65 of page 3].
- 4) With respect to claim 184 and 185, it is again noted that teletext data inherently represent instructions for locally generating and outputting corresponding teletext images at the receiver locations.<sup>37</sup>

<sup>35</sup> Note paragraph "C-5" of this Office action.

<sup>36</sup> e.g. US Patent #2,757,226 to Zworykin.

<sup>37</sup> See part "I" in paragraph "E-2" of this Office action.

**E-21) Claim 187, 191, 195 and 196 are rejected under 35 U.S.C. 103(a) as being unpatentable over Millar et al. [GB #1,370,535] in view of Marti et al. [US #4,290,062] for the same reason that was explained for claim 84 above. The following is noted:**

- 1) The recitations of claims 187 and 191 are met by the receiver side circuitry/processing of the applied prior art for the same reasons that were discussed with respect to claims 84 above.

**E-22) Claims 188-190, 193 and 194 are rejected under 35 U.S.C. 103(a) as being unpatentable over Millar et al. [GB #1,370,535] in view of Marti et al. [US #4,290,062] for the same reason that was explained for claim 187 above.**

- 1) With respect to claims 188-190, 193 and 194, it is noted that:
  - a) as evidenced in figure 7 of Marti et al., a receiver specific control signal is generated and stored from a "third" one of the discrete packet signal and serves (via comparator 56) as a basis for selecting the teletext page that is to be displayed; or alternatively
  - b) as evidenced in figure 7 of Marti et al., a receiver specific control signal is generated and stored from a "third" discrete signal (i.e. user inputs at 19) and serves (via comparator 57) as a basis for selecting the teletext page that is to be displayed;

wherein, in either case, the receiver specific page number data represents only partial address information;

**E-23) Claims 80 and 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Millar et al. [GB #1,370,535] in view of Marti et al. [US #4,290,062] for the same reason that was explained for claim 84 above. The following is also noted:**

- 1) Note section "III" of paragraph "E-II" of this Office action; and
- 2) Note that Millar et al. itself explicitly recognized the fact that the embedded teletext information could also be used to convey information from an originating

"station" location to intermediate "station" locations and for superimposing routing information onto the video signal at the intermediate location for "effecting automatic executive action relating to the signal routing and monitoring" [e.g. lines 36-47 of page 1].

**E-24) Claims 188-191, 193, and 194 are rejected under 35 U.S.C. 103(a) as being unpatentable over figure 2 of the 1976 article "TELETEXT RECEIVER LSI DATA ACQUISITION AND CONTROL" by Crowther et al. in view of Bart et al. [U.S. #4,218,698] for the same reasons that were set forth for claim 187 above. The following is noted:**

**1) With respect to claims 188 and 189:**

As is described in the first paragraph under the heading "Data Acquisition" on page 9/3 of the Crowther et al. article, a *receiver specific write control activation control signal* is **generated** based on a "third" discrete signal component of the received teletext data which identifies the page number of the data being received. This activation signal controls the "MEMORY" of figure 2.

**2) With respect to claim 190:**

It is noted that the page number itself only represents "partial information" of the identifier for each row of coded data that is to be captured and organized within the memory; i.e. each captured row is identified by row identifying addresses too.

**3) With respect to claims 191:**

The examiner notes that the control circuitry in the Crowther et al. system of figure 2 ("CONTROL CCTS.") inherently received the user specific datum before it is passed to the memory contained therein for storage thereat.

**4) With respect to claims 193 and 194:**

The examiner notes a receiver specific datum (i.e. the user inputted and stored teletext page number) is processed according to a third discrete signal of the teletext data (i.e. it is compared to the received page numbers) and is used to generate the activation signals which ultimately (e.g. "in response" thereto) causes the local generation, output, and display of the teletext image. [note the discussion with respect to claims 188 and 189 above].

**E-25) Claims 188-191, 193, and 194 are rejected under 35 U.S.C. 103(a) as being unpatentable over Betts [GB 1,556,366] in view of Bart et al. [U.S. #4,218,698] for the same reasons that were set forth for claim 187 above, in view of the 1976 article "TELETEXT RECEIVER LSI DATA ACQUISITION AND CONTROL" by Crowther et al. The following is noted:**

The processor (13) in Betts obviously, if not inherently, provides all of the same operations that are provided by data acquisition circuitry of Crowther et al. being that, as was noted above, the processor (13) of Betts simply represents a software implementation of such conventional dedicated circuitry [note lines 46-54 on page 1 of Betts]. Being such, it is maintained that claims 188-191, 193, and 194 are met for the same reasons that were addressed above in the immediately preceding paragraph of this office action.

**E-26) claims 192 and 197 are rejected under 35 U.S.C. 103(a) as being unpatentable over Betts [GB 1,556,366] in view of Bart et al. [U.S. #4,218,698] for the reasons set forth for claim 187 above, in view of Oono et al. [JP 55-028691].**

Claims 192 and 193 differ from the computer driven teletext decoder of the modified system of Betts et al. only in that the modified system of Betts et al. was a one-way teletext system and, therefor, did not comprise a return link for sending requests to a remote transmission site. However, as noted in Betts et al., a key advantage of its software implementation was its ability to be easily re-programmed to provide expanded/different receiver functions [e.g. lines 70-73 of page 1];

As set forth above in paragraph E-4 of this Office action, Oono et al. also described a software driven videotex decoder, wherein the configuration of the software driven decoder that was described by Oono et al. corresponded in many obvious ways to the configuration of the Betts et al. decoder [e.g. as can be seen by comparing the structure shown in figure 3 of Oono et al. to the structure shown in figure 1 of Betts et al.]. In the case of Oono et al., however, the decoder had been programmed to interact with the remote videotex database over a telephone line thereby, advantageously, adopting an *optimized* "hybrid" teletext/viewdata implementation.

Given the above, the examiner maintains that it would have been obvious to one of ordinary skill in the art to have utilized the noted programming/re-programming feature of the modified Betts et al. system to advantageously added the software needed for implementing the *optimized* "hybrid" videotext implementation as shown in Oono et al.; such an optimized implementation being both advantageous and desirable given its more efficient use of the available VBI bandwidth.

**E-27) claims 93, 107, and 108 are rejected under 35 U.S.C. 103(a) as being unpatentable over Betts [GB 1,556,366] in view of Bart et al. [U.S. #4,218,698] for the same reason that was set forth for claim 187 above.**

**E-28) claims 94, 95, 98, 100, 103, and 106 are rejected under 35 U.S.C. 103(a) as being unpatentable over Betts [GB 1,556,366] in view of Bart et al. [U.S. #4,218,698] for the same reason that was set forth for claim 93 above.**

SEE the discussion set forth above with respect to corresponding claims 188-191, 193, and 194 for a complete explanation.

**E-29) claims 102 and 109 are rejected under 35 U.S.C. 103(a) as being unpatentable over Betts [GB 1,556,366] in view of Bart et al. [U.S. #4,218,698] for the reasons set forth for claim 93 above, further in view of Oono et al. [JP 55-028691].**

SEE the discussion set forth above with respect to corresponding claims 192 and 197 for a complete explanation.

**E-30) claims 93, 107, and 108 are rejected under 35 U.S.C. 103(a) as being unpatentable over figure 2 of the 1976 article “TELETEXT RECEIVER LSI DATA ACQUISITION AND CONTROL” by Crowther et al. in view of Bart et al. [U.S. #4,218,698] for the same reasons that were set forth for claim 187 above.**

**E-31) claims 94, 95, 98, 100, 103, and 106 are rejected under 35 U.S.C. 103(a) as being unpatentable over figure 2 of the 1976 article “TELETEXT RECEIVER LSI DATA ACQUISITION AND CONTROL” by Crowther et al. in view of Bart et al. [U.S. #4,218,698] for the same reasons that were set forth for claim 93 above.**

SEE the discussion set forth above with respect to corresponding claims 188-191, 193, and 194 for a complete explanation.

**E-32) Claim 80 is rejected under 35 U.S.C. 103(a) as being unpatentable over Diederich (DE 2,356,966) and Germany (GB 959,274), in view of the article "CEEFAX – The Generation, Distribution and Transmission of a National Teletext Service" by Chambers.**

**I. What is claimed:**<sup>38</sup>

Claim 80 appears to be directed to a method involving a TV distribution network that is comprised of:

- 1) An originating transmitter;
- 2) A remote intermediate transmitter; and
- 3) A plurality of receiver stations;

Wherein, according to the recited method, said originating transmitter:

- 1) Transmits a signal to the intermediate transmitter which transmitted signal comprises:
  - a) Video: and
  - b) An instruct signal;

Wherein said instruct signal of the transmitted signal, when relayed by the intermediate transmitter to ones of the receiver stations, causes at least one of the receiver stations to generate and/or output a "locally generated" portion of a video presentation that is displayed at the receiver "in coordination" with the video; and

- 2) Also transmits a control signal to said intermediate transmitter which controls the intermediate station to communicate said transmitted signal (i.e. at least to communicate the video and instruct signal contained therein) to said receiver stations.

**II. The Showing of Diederich and Germany:**

It was notoriously well known in the art for conventional TV distribution networks to have comprised:

- 1) A national/network/central TV station (i.e. corresponding to the recited "originating transmitter") for generating and transmitting national/network/central TV programming;

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<sup>38</sup> Note part "III" in paragraph "E-2" of this Office action

- 2) One or more local/regional TV stations (i.e. corresponding to the recited “**remote intermediate transmitter**”) each of which:
- a) Receives the national/network/central TV transmission from the national/network/central TV station;
  - b) Generates its own regional/local TV programming and advertisements; and
  - c) Then:
    1. Re-transmits portions of the received national/network/central TV programming to TV “**receivers**” located within local regional/local service area during national/network/central programming time slots; and
    2. Transmits its own locally generated regional/local TV programming to said “receivers”, i.e. in place of the received national/network/central TV programming, during regional/local programming time slots.

Diederich and Germany have been cited to exemplify the fact that, within these notoriously well TV distribution networks, it was conventional for the national/network/central TV station to have embedded cuing signal information (i.e. corresponding to the recited “**at least one control signal**”) within transmitted national/network/central TV programming for automatically causing:

- a) The national/network/central TV programming to be “**communicated**” (i.e. retransmitted) by at least some of the local/regional stations during the national/network/central time slots; and
- b) The “**communication**” (i.e. retransmission) of the national/network/central TV programming to be inhibited by said some of the local/regional stations during the regional/local time slots.  
[That is, said embedded cuing information causes the local/regional programming to be communicated (i.e. transmitted) in place of the national/network/central TV programming during the regional/local time slots].

### **III. Differences:**

Claim 80 differs from the automated TV network described by Diederich and Germany only in that claim 80 requires the transmission of an additional “instruct signal”; i.e. in addition to the recited “control signal” addressed above.

### **III. Obviousness:**

The article by Chambers has been cited as exemplifying the fact that it was notoriously well known in the art for the national/network/central TV transmitter stations to have embedded a national/network/central Teletext data service

within the VBI of the national/network/central TV programming that was provided to, and selectively communicated by, the regional/local TV stations that it served [e.g. note the last 3 lines on page 1]. That is, Chambers notes that the national teletext service will not be re-transmitted by the local/regional stations when the local/regional programming is being transmitted in place of the national/network/central programming unless the national Teletext service is extracted from the received national programming and encoded into the local/regional programming during the local/regional time slots.

Given the showing of Chambers, the examiner maintains that one skilled in the art would have recognized the obviousness of having distributed a national/network/central teletext service (i.e. corresponding to the recited "instruct signal") within the national/network/central TV programming of the TV distribution systems as described by Diederich and Germany. The motivation for having added the national/network/central teletext service being the additional revenue that is generated by advertising contained therein.

*[Here it is noted that such an embedded teletext service was inherently operative, e.g. at the receivers which were configured with teletext decoders, to cause teletext images to be locally generated thereat based on locally entered user specific page selection (i.e. NOTE: paragraph C-3 of this Office action)].*

**E-33) claim 81 is rejected under 35 U.S.C. 103(a) as being unpatentable over Diederich (DE 2,356,966) and Germany (GB 959,274), in view of the article "CEEFAX – The Generation, Distribution and Transmission of a National Teletext Service" by Chambers, for the same reasons that were described for claim 80 above. Additionally, the following is noted:**

- 1) As noted above, both Diederich and Germany exemplified that it was conventional to have included cuing signals within national/network/central for automating the insertion of local/regional programming. This cuing signaling corresponds to the "second control signal" of claim 81.
- 2) Germany, however, also taught that it was desirable to have also included visible cuing signals within the picture portion of the network signaling for providing a visual "indicator"/"identifier" of the network breaks [note lines 53-62 on page 1]. Such a singla corresponds to the recited "information" of claim 81.

**E-34) Claim 93 is rejected under 35 U.S.C. 103(a) as being unpatentable over "MODE II" captioning as described in the publication the 1980 article entitled "Development & Applications of the Antiope-Didon Technology" by Guillermi, "ANTIOPE TELETEXT CAPTIONING" by Sechet and the "CBS/CCETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIOPE)" publication.**

**I. The examiner's position concerning the "State of the Art":**

1) The examiner takes Official Notice that, at the time of applicants' alleged invention, it was notoriously well known in the art to have implemented Teletext receiving and decoding circuitry using software driven signal processing devices (e.g. CPU MPU units). In fact, software driven implementations of Teletext receiver/decoder circuitry were recognized as being advantageous given their inherent flexibility.<sup>39</sup>

2) The examiner notes that, at the time of applicants' alleged invention, the predominate Teletext standards provided for a host of display control functions including:

- a) A *Clear Page* display function;
- b) *Reveal/Conceal* display functions;
- c) *Newsflash* and *Subtitle* display functions
- d) A *Page Selection* display function;
- e) A *TV Only* display function;
- f) A *Page Update* display function;
- g) etc,...

And, in the case of software driven Teletext receivers/decoders, these display control functions were performed by software subroutines of the software in the software driven signal processing devices.<sup>40</sup>

3) As listed above, one of the display control functions that was provided for by the conventional Teletext systems was *subtitling* (also known as *digital or closed captioning*). In these systems, the data packets of a designated Teletext page were used to convey program related caption data pertaining to the TV programming broadcast within which they were carried/embedded. At the receiver/decoder locations,

<sup>39</sup> Note: Lines 50-54 and 70-73 on page 1 of GB 1,556,366 to Betts [GB 1,556,366].

<sup>40</sup> Note: Lines 121-130 on page 3 of GB 2,054,328 to Cook et al.

this caption data was received and processed to locally generate caption-type images. These locally generated caption-type images were then synchronously displayed in a coordinated fashion along with, e.g. overlaid over or boxed within, the video component of the TV program to which they belonged. Synchronism between the displayed caption-type images was maintained at the transmitter side by synchronously embedding the caption data into the TV programming in accordance with the precise time at which it was to be displayed on the receiver side. Because of this strict timing constraint, only one kind of caption data (e.g. one language and/or level) could be transmitted at any given time using this method.

4) However, in countries comprised of diverse ethnic populations, it was desirable to have transmitted different kinds of captions data (e.g. different languages and/or levels<sup>41</sup>) within each TV program broadcast. To provide the desired multi-language and/or multi-level captioning capability, an additional captioning feature was developed (e.g. MODE II captioning) whereby Teletext standards/systems utilized a combination of the available display control functions, e.g. namely the *Subtitle* display function and the *Reveal/Conceal* (i.e. also known as *Mask/Unmask*) display functions, to provide a synchronous multi language/level captioning capability. That is, via this additional captioning feature, Teletext systems transmitted a plurality of different kinds of captions data with the packets of teletext data as "concealed" data conveyed within the TV programming in advance of a common display time. Each Teletext receiver/decoder received that portion of the concealed data which represented the kind of caption, e.g. the desired language and/or level, that was selected by the respective user. This portion of the concealed caption data was then captured by the respective receivers but was not used immediately to generate and/or output the locally generated caption images (i.e. the images were "Concealed"/"Masked"). At the correct display time, the transmitter station transmitted a corresponding "Reveal"/"Unmask" code which caused, when received at each receiver location, the respective captioning image data to be generated and/or outputted for display along with, e.g. over or within, the displayed TV programming to which it belonged (i.e. causing the concealed/masked captions to be "Revealed"/"Unmasked"). Thus, via this "MODE II" captioning feature, different kinds of caption data (i.e. different languages and levels) were sequentially transmitted to the respective receivers/decoders ahead of their desired common display time and then, in response to the same subsequently transmitted reveal/unmask display command, were simultaneously caused to generate/output different caption-type images in precise synchronism with the TV programming to which they all belonged.

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<sup>41</sup> The cited prior art alludes to the transmission of different "levels" of captioning along with, or in addition to, the different "languages" of captioning. The cited prior art, however, never explains what the different "levels" captioning might be or to what they might pertain. Regardless, the examiner maintains that such knowledge was well known in the art at the time of applicants' alleged invention as is evident from the 1976 French patent publication 2,297,533 which describes a system in which plural audio signals of a TV program are transmitted wherein each of the plural audio signals pertains to a different one of a plurality of languages or to one of a plurality of commentaries of different technical "levels".

**II. The "MODE II" captioning feature as described by "prior art":**

1) Those of ordinary skill in the art, at the time of applicant's alleged invention, recognized both a need and desire to transmit closed captioning data pertaining to multiple different languages within each TV program transmission. Because teletext captions were transmitted sequentially through the TV network, it was found to be difficult to simultaneously synchronize the display of the different captions/languages to the same TV programming. Hence, the "Mode II" captioning feature was developed and added to new teletext "standards" (e.g. to ANTIOPE) for the expressed purpose of synchronizing multiple captions to the same program.

**"The possibilities of teletext closed captioning for the hearing-impaired and for foreigners are well known and were first experimented in the United Kingdom. The problem of synchronizing the TV program and the captions was not really solved, except at the price of heavy time delay constraints. If several different languages are to be captioned at the same time with a given program, new developments are needed, because asynchronism appears for multilanguage captioning applications. The new standards make it very simple to add sophisticated captioning options to a normal teletext decoder: in this new process, the synchronism control signal are completely separate from the 'character attributes' - they are actually considered as a 'message attribute.'".**

[e.g. section 5.1.3 on page 33 of the 3/1980 publication "Development & Application of the Antiope-Didon Technology"]

2) The way in which "MODE II" captioning solved the synchronism problem was best explained among the prior art of record by the "CBS/CCETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIOPE)" which is dated May 20, 1981. [SEE: sections 7.0-7.3 on pages 135-138; and sections 8.9.1 to 8.9.2.2.2 on pages 159-162]. That is, as explained within this publication:

- a) Different classes of captioning (and different levels thereof) were transmitted from the transmitter as conventional teletext pages prior to the time that they were to be displayed;
- b) Each receiver captured and stored (but did not display) the page of teletext data which corresponded to the class (and the level) of captioning that was selected and desired by the user;
- c) At the desired time of display, a "reveal"/"unmask" message was transmitted from the transmitter station which caused/triggered the stored captions at the respective receivers stations to be simultaneously outputted and displayed in precise synchronism with the TV programming.

The Mode II captioning feature, therefor, provided the mechanism by which multiple program related captions could now be transmitted sequentially and asynchronously within the TV programming, while enabling each of these sequentially transmitted captions to be displayed simultaneously and in precise synchronism with the same TV programming at different receiver stations in response to the receipt of the same reveal/unmask display signal.

**"Through use of the "Y" bytes, program related pages can also be transmitted. Program related pages are those pages that are transmitted with a television program and are intended to be a complement to the television program. One example of a program related page is captioning"**

**"Captioning is a program related teletext message that is transmitted to the decoder and superimposed over the program video at a pre-designated time. The captioning message functions in a manner similar to a normal teletext message except that instead of having to select each page individually the user selects a classification of caption and a level (from 1 to 9) and the decoder automatically displays and erases the appropriate captions at the proper times.**

**In the case of captioning the session level identifies the fact that the message is a captions. A caption message is characterized by the fact that it is displayed, not over a blank screen, as in the case of normal teletext, but rather over program video. Depending on the decoder manufacturers' option, the caption may be displayed keyed over the video or inserted into the video in a box.**

**Captions are transmitted to the decoder with a bit in the header set so that the caption is captured and put into memory but not displayed. This way many different versions of the same caption may be sent and each decoder can capture the version it chooses. When the caption is to be displayed a simple control packet is sent with the caption type designator equal to the caption to be displayed along with a reveal bit. This causes the caption to be displayed over the program video. To erase the caption another message is sent to the decoder telling the decoder to erase the page and wait for the next caption"**

- 3) The 8/1980 publication "ANTIOPE TELETEXT CAPTIONING" also describes the "MODE II" captioning feature of the ANTIOPE standard. This publication has been cited in response to arguments that have been submitted by applicants throughout the present prosecution.<sup>42</sup> Namely:

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<sup>42</sup> E.G., applicants' have attempted to distinguish the claimed invention over applied teletext prior art by arguing that the signals of teletext are not conveyed within pluralities of discrete packet signals that, therefor, must be assembled/re-assembled on the receiver side of the network. As is evident from the cited prior art,

a) This publication makes it clear that the "MODE II" captioning feature of ANTIOPE utilizes the same teletext equipment that is used for the teletext service itself being that the captions are transmitted as standard teletext pages.

**"When Antiope is employed for captioning, it uses the same equipment as for teletext"** (the second column of page 618)

**"Each caption is broadcast in the form of a page which is identical to a teletext page. The page number is used to select the language – this is the number the user keys on the decoder keypad. The operation is the same as for the selection of a teletext page; the decoder functions are identical"** (the first column of page 619)

b) This publication makes it clear that all the teletext pages of the ANTIOPE standard were transmitted within the "discrete teletext transport packets" of the DIDON standard and that even the shortest of captions (i.e. the word "yes") had to be transmitted using more than one of these discrete DIDON transport packet.

**"The word 'yes', wherever it is located on the screen, if it is white on black, is coded in 23 bytes (i.e. 1.15 DIDON packets), and text containing 40 characters requires 60 bytes (i.e. 3 packets)"** (the second column on page 619)

c) This publication re-emphasizes that it was the ability of the ANTIOPE system to mask (conceal) and unmask (reveal) teletext messages which enabled the ANTIOPE system to separate the act of transmitting messages/captions from the act of displaying them (i.e. a feature that is vital to the implementation of the MODE II captioning).

**"Considerable flexibility is also given by the use of text masking and unmasking attributes. They enable us to differentiate reception, which can be stored, from display, which is requested a particular moment without being dependent on the time of transmission"** (page 619)

### **III. A Comparison of Applicants' Disclosed Invention and "MODE II" captioning:**

1) In applicants' disclosed "WALL STREET WEEK" application, a "command signal" was embedded, at a specific time, within the "Wall Street Week" TV program being broadcast from a transmitter station. At each receiver station, said "Wall Street Week" program was received and the "command signal", embedded therein, was detected. At each receiver station, the detected "command signal" triggered a locally generated user

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applicants' argument is simply untrue (i.e. even the shortest of teletext messages were conveyed within a plurality of discrete teletext packet signals).

specific graphic to be displayed as an overlay over the displayed video portion of said received "Wall Street Week" program. Thus, via the embedding of a single "command signal", the display of different locally generated user specific overlays at different receiver stations were all "synchronized" to occur at said specific time within the "Wall Street Week" program.

2) As discussed above, the conventional "MODE II" captioning feature of the ANTIOPE teletext standard, like applicants' own "Wall Street Week" application, also utilized a single "command signal" to cause different "locally generated" program related teletext captions to be simultaneously overlaid at respective TV receiver stations in precise synchronism with the TV programming to which relate

Namely, in MODE II captioning, reveal/unmask "command signals" were embedded, at specific times within, a transmitted TV program being broadcast from a transmitter station. At each receiver station, said program was received and the reveal/unmask "command signals", embedded therein, were detected. At each receiver station, each detected reveal/unmask "command signal" triggered a locally generated user specific graphic (e.g. a respective "program related caption") to be displayed as an overlay over the displayed video portion of said received TV program. Thus, via the embedding of each reveal/unmask "command signal", the displays of different "locally generated" user specific overlays at different receiver stations were all "synchronized" to occur at the specific times within the TV program.

#### IV. With regard to the Limitations of claim 93:

- 1) "MODE II" captioning was a feature that was explicitly provided for by the extended ANTIOPE teletext standard itself.<sup>43</sup>
- 2) All levels of the receivers/decoders of the ANTIOPE standard were known to have been implemented using a software driven processor and in some cases, i.e. the advanced level receiver/decoder, actually required the software driven processor implementation.<sup>44</sup>
- 3) The ANTIOPE standard describes the MODE II captioning capability and provides for it within its data format specification. However, as with most standards, the ANTIOPE standard leaves it up to each manufacturer to develop proprietary ANTIOPE receiver/decoder software and/or circuitry which operates according to the ANTIOPE standard to provide the features/capabilities described/defined therein; e.g. including

<sup>43</sup> Note the discussion of systems "A" and "C" in the revised "EIA Systems Analysis Chart" of 8/20/1981 and, in particular, note section 7.1.2.3 therein.

<sup>44</sup> Note the discussion of systems "A" and "C" in the revised "EIA Systems Analysis Chart" of 8/20/1981. In particular, note sections: 5.2.1.3 (concerning structure of basic level receiver/decoder), 5.2.1.2 (concerning structure of intermediate level receiver/decoder), 5.3.1.2 (concerning structure of advanced level receiver/decoder).

MODE II captioning. Being such, and given that which has been discussed above, the following positions are taken:

- a) Any and all ANTIope teletext receivers/decoders that operated to receive and display conventional "MODE II" digital captioning of a user/subscriber selected language/level, necessarily "received" and "stored" the "specific user/subscriber input datum" that was required to select the language and/or "level" of "MODE II" captioning images that was to be generated and displayed in response to the subsequently transmitted Reveal/Unmask command [the receiver/decoder could not have operated as described if this were not the case];
- b) Any and all ANTIope teletext receivers/decoders that operated to receive and display conventional "MODE II" digital captioning of a user/subscriber selected language/level, necessarily "received" the TV broadcast "information transmission" that included the "MODE II" digital captioning data embedded therein. As noted in the Sachet publication [lines 18 – 31 in the second column on page 619], even the shortest of digital captions (i.e. the word "yes") required more than one "discrete" Teletext data packet "signal" for its transmission through the TV network. Therefor, *obviously*, even the shortest of the "MODE II" captions were necessarily transmitted within at least "first" and "second" discrete videotex packet signals making it necessarily for these plurality of packets to have been processed in conventional videotex fashion (note section C of this Office action). That is, the plurality of packets of each caption were necessarily:
  - 1) "Received" by the receiver/decoder within the received TV signal;
  - 2) "Detected" by the receiver/decoder within the received TV signal and extracted therefrom;
  - 3) "Passed" to a processing element of the receiver/decoder (be it implemented in software or dedicated logic) and organized back into a complete instruction set (note paragraph C-3 of this Office action);
  - 4) "Organized" by the processing element back into a complete page of Teletext displayable instructions (i.e. the complete instruction set), wherein:
    - A) The so organized page of display instructions was used to locally "generate" the desired "MODE II" captioning images of the language/level that had been selected in response to the user/subscriber inputs; and
    - B) In response to the subsequently transmitted Reveal/Unmask signaling, the so generated "MODE II" captioning images were displayed synchronously and thus in "coordination" with, i.e. overlaid over and/or boxed within, the TV programming with which they are associated.

**E-35) Claims 94, 95, 98, 100, 107, 108, and 187 are rejected under 35 U.S.C. 103(a) as being unpatentable over “MODE II” captioning as described in the publication “ANTIOPE TELETEXT CAPTIONING” by Sechet and the “CBS/CCETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIOPE)” publication for the reasons set forth for claim 93 above. The following is noted:**

- 1) With respect to claims 94-100 it is noted that the user input represents a “third discrete signal”, controls the Teletext receiver/decoder, and represent partial information because it identifies only the caption portion of the presentation.

**E-36) Claim 84 is rejected under 35 U.S.C. 103(a) as being unpatentable over “MODE II” captioning as described in the publication “ANTIOPE TELETEXT CAPTIONING” by Sechet and the “CBS/CCETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIOPE)” publication for the reasons set forth for claim 93 above. The following is noted:**

- 1) The steps that are positively recited in claim 84 simply require: the receipt of a video at a transmitter station; the receipt of first and second discrete signals at the transmitter station; the delivery/transfer of the received video to the transmitter of the transmitter station; the delivery/transfer of the received first and second discrete signals to the transmitter of the transmitter station; and the transmission of the delivered video and the delivered first and second discrete signals from said transmitter to at least one receiver station.

The examiner takes Official Notice that transmission circuitry required to receive and embed the discrete packetized data signals of a conventional teletext service into the video portion of the TV programming that was being delivered to (and transmitted by) the TV transmitter located thereat, was notoriously well known in the art at the time of applicants' alleged invention. The examiner maintains that all of the steps that are positively recited by claim 84 are clearly met by steps that necessarily occurred within any such TV broadcast station that operated to embed the discrete packet signals of a conventional teletext service into the VBI of its TV programming prior to broadcast. Being such, the examiner maintains that the recitations of claim 84 differ from such conventional teletext TV transmission station structure only with respect to the purely functional language that has been incorporated into the claim pertaining to the effect of the transmitted discrete signals on the receiver side of the network.

- 2) The examiner maintains that the functional language of claim 84 read on “MODE II” captioning for reasons that have already been fully addressed with respect to the

limitations of claim 93. It is therefor noted that "Mode II" captioning merely represents a feature that was known to have been provided by/within the discrete packet signals of conventional teletext services described above. Thus, to the extent that such functional recitations carry patentable weight, such functional recitations are met by the fact that "MODE II" captioning was a feature conventionally provided as part of said transmitted teletext services.

**E-37) Claim 80 is rejected under 35 U.S.C. 103(a) as being unpatentable over conventional TV system configurations in view of:**

- 1) The article “The Automation of Small Television Stations” by Young et al.;**
- 2) The article “Microprocessor for CATV Systems” by Tunmann et al.; and**
- 3) Conventional Teletext distribution and display systems as evidenced by Bart et al. [US patent #4,218,698].**

The examiner's position (summarized):

At the time of applicant's alleged, it was known in the TV art for centralized network TV stations to have transmitted program transmission schedule information to their intermediate affiliated TV stations to remotely control (i.e. automate) broadcast switching operations at the intermediate stations; wherein these controlled switching operations determined when the network TV programming was to be received and rebroadcast by the intermediate stations and, alternatively, when local/regional TV programming was broadcast in place of the received network programming. The examiner maintains that it was obvious for the network TV programming in such systems to have carried embedded data representing a typical national teletext service, wherein such a typical teletext service was inherently comprised of instructions that caused locally generated teletext images to be overlaid over (i.e. displayed *in coordination with*) TV programming based on user specific input/request data. Such "prior art" meets all the limitations of claim 80.

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I. The state of the art:

Claim 80 recites a TV distribution system of ***conventional*** design. That is, ***conventional*** TV system configurations were known to have comprised:

- 1) An originating TV station (e.g. a ***conventional*** network TV station);
- 2) An intermediate TV stations (e.g. ***conventional*** affiliate TV stations); and
- 3) A plurality of ultimate receiver TV stations (e.g. ***conventional*** household TV receiver stations).

II. The Alleged novelty (i.e. alleged differences):

Being such, patentability of claim 80 does **not** rest on the recitations that are directed to this ***conventional*** TV system configuration. Rather, patentability of claim 80 rests on the recited operations that are performed within the recited

conventional TV system configuration. Specifically, the patentability of claim 80 rests on alleged novelty/non-obviousness of at least one of the following recited steps/processes:

- 1) The recited step/process in which a control signal (e.g. disclosed as a signal representing a TV program transmission schedule) was "transmitted" (e.g. disclosed as being downloaded via a phone line) from the originating TV station to the intermediate stations, whereby this transmitted control signal (i.e. the TV program schedule that was downloaded via a phone line) controlled/automated the TV program switching/distribution operations at the intermediate station  
**[i.e. that which is recited in lines 9-12 of claim 80]**

and

- 2) The recited step/process in which the signal that is transmitted by the originating TV station of the network configuration (e.g. network TV programming) includes a video component (i.e. the video component of the network TV programming) and an instruct signal component (e.g. an instruct signal that is embedded within the VBI of the network TV programming), wherein the instruct signal component operates at least one of the ultimate receiver stations to control the generation or outputting of a locally generated video information, wherein the generation/outputting of the local video information is based on user specific data and is coordinated with the video portion of the network programming.  
**[i.e. that which is recited in lines 4-8 of claim 80]**

### III. Obviousness:

However, these two recited steps/processes are neither novel nor non-obviousness within the conventional TV environment as is evident by the following:

- 1) First, within TV networks of such conventional design, it was recognized as having been desirable to have automated the network by "transmitting" a "control signal" from the originating/network TV station location that represented TV program scheduling information, whereby this transmitted control signal was used to control the program switching/distribution operations performed by the intermediate/affiliate TV stations of the TV network. That it was known and desirable is evident in the following:
  - a) The 1971 SMPTE publication "The Automation of Small Television Stations" by Young et al. at least evidences the fact that it was known to have been desirable to download control signals from the network headquarters to the intermediate stations in order

to have controlled/automated the TV program switching/distribution operations at the intermediate station

**[i.e. Lines 3-6 in the third column on page 806 of the Young et al. publication]**

b) That the 1978 publication "Microprocessor for CATV Systems" by Tunmann et al. evidences the fact that it was known to have have "transmitted" TV transmission schedules to intermediate TV station from a remote station location via a telephone line

**[i.e. The last 22 lines in the first column on page 72 and the first 14 lines of the second column on page 72 of the Tunmann et al. publication]**

2) Further, as noted above in paragraph 4 of this Office action, conventional teletext transmissions were known to have comprised different "instruct signals" each of which, when selected at a receiver based on data specific to a user (i.e. a user entered teletext page number), caused the receiver to locally generate a teletext image; wherein such locally generated teletext images were necessarily displayed in "coordination with" the video portion of the TV signal whenever the receiver circuitry was set to operate a "mixed" display mode (e.g. as is the display of subtitles, program related pages, etc,...).

a) That it was known to display teletext data in a mixed mode is evident by Bart et al. [e.g. lines 12-37 of column 1 of US patent #4,218,698]; and

b) That it was known to have transmitted a teletext service from the "originating station" of the conventional TV signal configurations is evident in the following:

"When regional programmes are broadcast by transmitters [in place of national programs] the teletext data [of the national teletext service] is lost unless it is decoded from the national network and regenerated as data lines for addition to the local network output"

**[i.e. The last three lines of the first page of the 1976 article  
"CEEFAX – THE GENERATION, DISTRIBUTION, AND  
TRANSMISSION OF A NATIONAL TELETEXT SERVICE" by  
Chambers]**

**E-38) Claim 80 is rejected under 35 U.S.C. 103(a) as being unpatentable over conventional TV system configurations in view of: 1) the article "The Automation of Small Television Stations" by Young et al.; 2) the article "Microprocessor for CATV Systems" by Tunmann et al.; and Mode II captioning as described within the "CBS/CCETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIOPE)" publication.**

I. The state of the art:

Claim 80 pertains to a TV distribution system of ***conventional*** design. That is, ***conventional*** TV system configurations were known to have comprised:

- 1) An originating TV station (e.g. a ***conventional*** network TV station);
- 2) An intermediate TV stations (e.g. ***conventional*** affiliate TV stations); and
- 3) A plurality of ultimate receiver TV stations (e.g. ***conventional*** household TV receiver stations).

II. The Alleged novelty (i.e. alleged differences):

Being such, patentability of claim 80 does **not** rest on the recitations that are directed to this ***conventional*** TV system configuration. Rather, patentability of claim 80 rests on the recited operation of the recited conventional TV system configuration. Specifically, the patentability of claim 80 rests on alleged novelty/non-obviousness of at least one of the following recited steps/processes:

- 1) The recited step/process in which a control signal (e.g. disclosed as a signal representing a TV program transmission schedule) was "transmitted" (e.g. disclosed as being downloaded via a phone line) from the originating TV station to the intermediate stations, whereby this transmitted control signal (i.e. the TV program schedule that was downloaded via a phone line) controlled/automated the TV program switching/distribution operations at the intermediate station  
**[i.e. that which is recited in lines 9-12 of claim 80]**

and

- 2) The recited step/process in which the signal that is transmitted by the originating TV station of the network configuration (e.g. network TV programming) includes a video component (i.e. the video component of the network TV programming) and an instruct signal component (e.g. an instruct signal that is embedded within the VBI of the network TV programming), wherein the instruct signal component operates at least

one of the ultimate receiver stations to control the generation or outputting of a locally generated video information, wherein the generation/outputting of the local video information is based on user specific data and is coordinated with the video portion of the network programming.  
**[i.e. that which is recited in lines 4-8 of claim 80]**

**III. Obviousness:**

However, these two recited steps/processes are neither novel nor non-obviousness for the following reasons:

1) First, within TV networks of such conventional design, it was recognized as having been desirable to have "transmitted" a "control signal" from the originating/network TV station location representing TV program scheduling information to control the switching/distribution operations performed by the intermediate/affiliate TV stations of the TV network. This fact is evident in the following:

a) The 1971 SMPTE publication "The Automation of Small Television Stations" by Young et al., at least evidences the fact that it was known to have been desirable to download control signals from the network headquarters to the intermediate stations in order to have controlled/automated the TV program switching/distribution operations at the intermediate station

**[i.e. Lines 3-6 in the third column on page 806 of the Young et al. publication]**

b) That the 1978 publication "Microprocessor for CATV Systems" by Tunmann et al. evidences the fact that it was known to have have "transmitted" TV transmission schedules to intermediate TV station from a remote station location via a telephone line

**[i.e. The last 22 lines in the first column on page 72 and the first 14 lines of the second column on page 72 of the Tunmann et al. publication]**

2) Further, that it was known and obvious within such TV distribution systems to have "transmitted" a *Reveal/Unmask* "instruct signal" within the network TV programming to control the generation (and outputting) of a locally generated closed caption images in coordination with the video portion of the network programming based on user input data, is evident in the following:

a) By the "MODE II" captioning feature of the "CBS/CCETT North American Broadcast Teletext Specification", wherein "reveal" signals were conveyed within the TV programming to instruct the receiver stations to locally generate/output captioning images in

coordination with the video component of the TV programming, wherein the locally generated captioning images at each receiver were based on the type and level of captioning that was selected by user specific selection data inputted at each receiver station by each user [SEE: part "C" in paragraph 4 of this office action  
**[i.e. Pages 135-138 of the 5/1981 "CBS/CCETT North American Broadcast Teletext Specification (Extended ANTIOPE)" publication]**

**E-39) Claim 80 is rejected under 35 U.S.C. 103(a) as being unpatentable over the article “The Automation of Small Television Stations” by Young et al. in view of the conventional Teletext broadcast service that was described within the “CBS/CCETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIODE)” publication.**

A) The examiner takes “*Official Notice*” that it was notoriously well known in the TV distribution art for the vast number of TV distribution networks to have comprised:

- 1) An origination TV station (e.g. a central “Network” station);
- 2) Intermediate TV stations (e.g. regional and/or local “affiliate” stations); and
- 3) Ultimate receiver station (i.e. household TV receiver stations/locations).

***“American television is predominately sponsored; in other words the advertisements which provide the revenue for paying for the entertainment are contained within the framework of the programme. The vast number of television stations in the United States cannot, however, afford to produce all their own programme material locally, due to the competitive nature of the system, and therefore the majority of the stations are affiliated to one of the three major network organizations which exist. The sole business of these networking organizations is to produce programmes having national appeal for nation-wide distribution. The programme output, therefore, from local stations in the United States consists predominantly of network material with inserted news, weather programmes and commercials, all of which have regional appeal. They therefore have to adopt a rigid system of time-keeping to ensure that each local station after doing a local insert can return to the network to join a***

***programme which must obviously, because of its national nature, start at an exact time.”***

[Lines 18-40 in the first column on page 35 of the 2/6/1959 article “Master Control Techniques” by Marsden]

B) The article by Young et al. has been cited because it illustrates conventional intermediate TV station structure that has been automated to avoid human error

and to meet the rigid time constraints demanded by TV distribution network (as described above). As is shown in figure 3, the automated intermediate TV station set forth in Young et al. comprised:

- 1) Switching circuitry ("VIDEO AUDIO SWITCHER") comprising:
  - a) A first input terminal (@ "NET'S") for receiving the Network TV programming being transmitted from an upstream Network TV station;
  - b) A plurality of additional input terminals (@ "STUDIOS", "VTR'S", "T/C'S", "CART'S") for receiving local TV programming from a plurality of local TV signal sources; and
  - c) An output terminal ("XMTR") for providing selected ones of the programming inputs to a local transmitter for transmission to a plurality of ultimate receiver stations being serviced thereby;
- 2) A computer ("CPU") which receives (e.g. via "CARD READER", "KEYBOARD") data representing a TV programming broadcast schedule that defines the station's switching events and, in response thereto, generates:
  - a) The control signals that are used to control the plurality of local TV signal sources (via the "MACHINE INTERFACE") to produce and output local TV programming at its scheduled times; and
  - b) The control signals that are used to control the operation of the switching circuitry ("VIDEO AUDIO SWITCHER") so as to pass the locally produced TV programming and the Network TV programming to the local transmitter at its scheduled time.

The article by Young et al. also recognized the desire of having allowed the computer of the automated intermediate station to receive the schedule data from the remote "network headquarters" location rather than the local sources.

**"Further developments now are more likely in the data-handling aspect, such as programming events from the network headquarters rather than locally"** <sup>45</sup>

[lines 3-6 in the third column on page 806]

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<sup>45</sup> The examiner notes 1) element 12 in figure 1 of US Patent #3,627,914 to Davies, and 2) the discussion with respect to figure 2 of the article "Microprocessor for CATV Systems" to Tunmann et al., should a question of "enablement" pertaining hereto arise.

Obviously, if not inherently, this described "network headquarters" location was the "network TV station's" location too.

3) Given the above, with respect to the limitations of claim 80, it is maintained that the article by Young et al. described a TV station that comprised:

1) An "origination transmitter", i.e. the network transmitter station, that transmitted:

- a) The "signal" representing the network TV programming which includes a video component; and
- b) "At least one control signal", comprised of the local TV stations scheduling data, which *transmitted* from the "network headquarters" location to the computer of the local station for control thereof.

4) Claim 80 differs from the showing of Young et al. only in that claim 80 also recites that the "signal" transmitted from the origination station includes an "instruct signal" in addition to the video, whereby this instruct signal controls the ultimate receiver stations to generate a portion of a video presentation based on "user specific data".

5) The examiner takes Official Notice that it was notoriously well known in the TV art for Network TV station to have provided an embedded Teletext data service within the VBI of their transmitted network TV programming. The "CBS/CETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIOPE)" publication describes a conventional Teletext service/standard that was to be used by the TV broadcast systems in North America; i.e. such as that described by Young et al. As set forth in section 7 of this publication, e.g. pages 136-138, the Teletext service/standard provided for the transmission of program related captioning. Specifically, the described Teletext service enabled multi-level captioning (i.e. of multi-languages) to be conveyed within the VBI of the broadcasted TV programming being broadcasted whereby, at the ultimate receiver locations, users were able to enter "user specific" selection data that identified a desired "level" of captioning that was to be received (i.e. a desired language) and, based on this received user specific selection data, caused the user's ultimate receiver station to commence locally generating and overlaying image data corresponding to the user selected captions; i.e. wherein this local image data was generated and displayed in response to *reveal bit* "instruct signals" that were carried within the received TV programming [note section 7.3]

of the "CBS/CCETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIOPE)" publication].

6) In view of the above, the examiner maintains that it would have been obvious to one of ordinary skill in the art for the Network station in Young et al. to have carried a conventional Teletext service of the type described in of the "CBS/CCETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIOPE)" publication within the VBI of the network programming. Motivation for the modification stems from the fact that providing such Teletext services was a known and conventional way by which TV stations boosted their revenues (i.e. via the sale of additional advertising space carried therein).

**E-40) claim 81 is rejected under 35 U.S.C. 103(a) as being unpatentable over the article "The Automation of Small Television Stations" by Young et al. in view of the conventional Teletext broadcast service that was described within the "CBS/CCETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIOPE)" publication for the same reasons that was set forth for claim 80 above.**

- 1) The examiner notes that claim 81 further requires that a "second control signal" be transmitted from the origination station which "facilitates" (but not necessarily *controls*) the transmission of video programming that was identified by the first "at least one control signal".
- 2) The examiner takes Official Notice that it was notoriously well known in the TV broadcast art for the network stations to have embedded all sorts of control signals within the network programming for advantageously "facilitating" the accurate passing/communication of it network video programming through the downstream affiliate/intermediate TV stations.<sup>46</sup> These control signals were known to have included:
  - a) VIT test signaling;
  - b) Cuing signals (i.e. visible and non-visible);

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<sup>46</sup> E.g. note: The discussion under the heading "conclusion" on page 82 of the publication "The vertical Interval: A General-Purpose Transmission Path" by Anderson; GB patent document #871,238 to Marsden; GB patent document #959,274 to Germany; GB patent document #1,370,535 to Millar et al.; JP patent document #55-53984 to Jinno et al.; JP patent document #56-51161 to Kamishima et al.; etc,...

- c) Program labels/identifiers/monitoring codes;
  - d) Messages for alerting downstream stations of upcoming changes in program schedule;
  - f) etc,...
- 3) Given the known advantages provided thereby, the examiner maintains that it would have been obvious to one of ordinary skill in the art for the network station in Young et al. to have been implemented in a manner as to provided one or more of this notoriously well known control-type signaling.

**E-41) Claim 84 is rejected under 35 U.S.C. 103(a) as being unpatentable over the "Mode II" captioning application of teletext as described in the "CBS/CCETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIOPE)" publication.<sup>47</sup>**

**I. PREFACE (Conventional Teletext):**

At the time of applicant's alleged invention, with only a few exceptions (i.e. Asian language systems), teletext transmission systems worldwide were based on either the variable format "ANTIOPE"/"DIDON" Teletext system that was developed in France, or on the fixed format of the "UK Teletext Specification"<sup>48</sup> that was developed in Britain. With respect to these conventional teletext systems, the following is noted:

- 1) Contrary to applicants' allegations, each transmitted page of teletext data in all of these conventional systems comprised a "series of instructions" which were to be "executed" by the teletext decoder on the receiver side of the teletext system. By executing a given series of instructions, said teletext decoder was instructed on how to "locally generate" a respective teletext image for display. When the locally generated teletext image was program related data, e.g. such as captioning, the teletext decoder displayed said locally generated image "in conjunction with" the TV program to which it was related. That is, the locally generated captioning was either "inset" or "boxed" into the video images of the displayed TV programming.

**"The first step in teletext service is the translation by a teletext editor of text, pictorial information and display attributes (such as color, flashing characters and so on) into a series of instructions to be transmitted to the teletext decoder. The instructions for each page in the teletext 'library' are then broadcast continuously on a revolving basis by multiplexing the data into the vertical blanking interval. The user accesses a desired page of teletext information by entering the page number, e.g. by pressing the appropriate buttons on a control**

<sup>47</sup> The examiner notes applicant's appear only to have submitted an incomplete copy of this publication (selected sections). Applicant's document is dated May 20, 1981. The examiner has obtained a complete copy of this document which is dated June 22, 1981. The page numbers cited in the rejection correspond to those of the examiner's complete June 22, 1981 copy (i.e. the cited sections appear to correspond to both).

<sup>48</sup> e.g. having roots in CEEFAX & ORACLE

**unit. The teletext decoder then selects the page from the revolving transmission, stores the coded information in memory,**

**processes that information to the extent necessary for display, and produces the page on the television screen. Where captioning is transmitted, the decoder will superimpose the captioning over the normal television picture" (emphasis added)**

[Page 5 of the 3/26/1981 "Petition For Rulemaking" file with the FCC by the United Kingdom Teletext Industry]

**"Picture display devices of such type, have a picture screen on which a mixed picture signal can be displayed are known. By means thereof pictures can be displayed in which *locally generated* characters, drawing elements and similar items can be superimposed on a normal picture, for example a moving picture transmitted, for example, by a transmitter and received in a conventional manner. Such a signal can be [*locally*] generated by, for example, a teletext decoder in the display device"** (emphasis added)

[The first paragraph under the heading "Background of the Invention" in column 1 of US Patent #4,347,532 to Korver]

**"In a picture display device for displaying a mixed picture signal which signal comprises a conventionally received television picture signal and a *locally generated signal*, such as a teletext sub-title..."**

[The first 6 lines in the abstract of GB 2,062,401 patent document to Korver]

2) Despite applicants' arguments to the contrary, any such "series of instructions" that represented a teletext page of more than one character row in length in all of these conventional systems, had to be necessarily divided up and "transported" through the TV network in the form of a plurality of discrete teletext signal packets; i.e. due to the fact that the bandwidth of each packet, and thus the amount of data that it carried, was limited by the available bandwidth of the respective horizontal line interval of the TV signal into which each packet was embedded; and

3) Despite applicant's arguments to the contrary, the teletext decoders in all of these conventional systems, i.e. when receiving packets of teletext data embedded within received TV programming transmissions, necessarily operated:

a) To receive and demodulate a TV signal that contains discrete teletext transport packets embedded therein;

- b) To separate the discrete teletext transport packets from the received TV signal;
- c) To detect and identify those of the separated discrete teletext transport packets which are carrying discrete portions of the "series of instructions" pertaining to a desired teletext page;
- d) To extract the discrete portions from the identified packets and to organize said discrete portions back into the complete "series of instructions" for the desired teletext page; and
- e) To execute the so recovered "series of instructions" to locally generate the teletext image represented thereby.

**II. The recitations of Claim 84:**

The following is noted:

- a) That the recited steps of "receiving...video", "delivering", "transferring", and "transmitting" of claim 84 all appears to pertain to transmitter side operations of a TV network. If true, then the examiner points out that all of these recited steps are met by operations that were necessarily performed by all conventional TV stations that functioned to embed and transmit the discrete teletext packets of a standard teletext service into their TV programming transmissions. Namely, to embed a teletext service within its programming transmission, a conventional TV station necessarily operated:
  1. To receive the video component of the TV programming that was to be transmitted by the station;
  2. To transfer the received video component of the TV programming to the station's transmitter;
  3. To receive the discrete transport packets of the teletext service to be transmitted by the station;
  4. To transfer the received transport packets of the teletext service to the stations transmitter; and
  5. To transmit the transferred video component of the TV programming, along with the transferred transport packets of the

teletext service, from said transmitter as a combined information signal.<sup>49</sup>

b) That the preamble of claim 84 along with the recited step of "receiving a first discrete signal and a second discrete signal..." appear to pertain receiver side operations of the TV network. Namely, these recitations appear to define the transmitted data as being of a type that is used on the receiver side of the system to locally generate program related images that are displayed on the receiver side "in conjunction with" video programming, wherein these locally generated image is generated "based on" user specific data that was received and stored at the receiver side prior to organization of the discrete signals. Unlike the recited transmitter side processing, this recited receiver side processing does not correspond to processing that **must have necessarily** been performed by all of said conventional teletext systems/receivers/decoders. However, it does correspond to received side operations that were necessarily performed by at least some of said conventional teletext systems/receivers/decoders. That is, the examiner maintains that the recited receiver side processing of claim 84 is met, for example, by the conventional receiver side processing of teletext data that necessarily occurred during the receipt and display of "Mode II" captioning.

### III. Mode II captioning:

The "CBS/CCETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIOPE)" publication has been cited because it evidences that the "Antiope"/"DIDON" teletext standard explicitly provided for a "Mode II" captioning application. While the system structure needed to implement this application was not described within the publication, one skilled in the art would have understood that any implementation of this teletext based application would have necessarily included circuitry that operated:

1) On the transmitter side of the system:

a) To have "received" the video component of a television signal that was to be transmitted [all TV transmitter stations comprises circuitry that received the TV programming that is to be transmitted];

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<sup>49</sup> Note, for example, the figure at the top of page 39 of the 1977 article, "The television as a receive only terminal", by McArthur [Systems International, Vol. 5, no 2, pages 38-39]

- b) To have "transferred" the video component of the television signal to a transmitter [all TV programming that is transmitted by a transmitter must be transferred to it first];
- c) To have "received" discrete packets of teletext information from a teletext source/provider [all TV transmitter stations which transmit teletext services must have circuitry which receives the teletext packets which are to be transmitted];
- d) To have "transferred" the discrete packets of teletext information to the transmitter [all teletext packets which are transmitted by a TV transmitter must be transferred to the transmitter before they can be transmitted]; and
- e) To have "transmitted" the received video component of the television signal and the received teletext packets of the teletext service over from the transmitter to the receiver side of the TV network as a combined information signal [the received signal are in fact transmitted by the transmitter];

**[SEE: the discussion under the heading "1.0 DATA TRANSMISSION & WAVEFORMS" on pages 4-8 of the publication; the discussion under the heading "2.0 DATA Line" on pages 9-10 of the publication; the discussion under the heading "3.0 DATA PACKET" on pages 11-14 of the publication; and parts "I and II" of this rejection]**

2) And, on the receiver side of the system:

- a) To have received the combined information signal from the transmitter [the combined signal must be received from the transmitter before it can be processed at the receiver];
- b) To have separated the discrete teletext data packets of the teletext service from the combined information signal [the embedded teletext packets must be separated from the combined signal before they can be processed by the decoder];
- c) To have received "user specific data" from a user representing a user selected "class" and "level" of captioning [NOTE: lines 3-8 under heading "7.3" on page 142];

- d) To have identified/processed, based on the received user specific data, those of the separated discrete teletext packets that carry a portion the "series of instructions" of the teletext page that corresponds to the user selected "class" and "level" of captioning [NOTE: that captioning is nothing more than program related teletext page/message as discussed in the first paragraph under section "7.3" on page 142 of the publication and in sections "8.10" and "8.10.1" on page 164 of the publication; lines 4-7 under heading "8.10.2.2.2 on page 166 of the publication; and part "I." of this rejection];
- e) *Obviously*<sup>50</sup>, to have extracted and "organized" the identified portions so that a complete "series of instructions" representing the teletext message can be captured and stored within the decoder [NOTE: lines 14-18 under the heading "7.3" on pages 142 and 143 of the publication; lines 9-11 under the heading "7.1"]; and
- f) To have executed said locally stored "series of instructions", e.g. in response to a subsequently transmitted instruct signal of the teletext data service, so as to have "locally generated" captioning image pertaining to the user selected "class" and "level" and to have synchronously displayed this generated image superimposed over, i.e. "in conjunction with, the video portion of the transmitted TV signal [NOTE: lines 14-20 of section "7.3" on pages 142 and 143 of the publication].

[SEE: the discussion under the heading "7.0 Applications" pages 140-143 of the publication; the discussion under the headings "8.10 Captions Using Teletext" to "8.10.2.2.3 Caption Removal" pages 164-167; and parts "I and II" of this rejection]

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<sup>50</sup> As noted above, any teletext page that comprised more than one row of characters had to be disassembled and sent via a plurality of discrete teletext packets and, therefor, were re-assembled (i.e. re-"organized") by the decoder. While not explicitly stated, because the program related teletext pages of Mode II captioning were conventional teletext pages, it would have been obvious to one of ordinary skill in the art that Mode II captioning comprised pages/captions that were greater than one character row in length(e.g. there is nothing in the Antiope specification which limits the length of a Mode II caption to a single 40 character row).

**E-42) claim 85, 184, 185 are rejected under 35 U.S.C. 103(a) as being unpatentable over the "Mode II" captioning application of teletext as described in the "CBS/CCETT NORTH AMERICAN BROADCAST TELETEXT SPECIFICATION (EXTENDED ANTIOPE)" publication, for the same reasons that were set forth for claim 84 above.**

**Double Patenting:**

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

**E-43) Claims 56-58, 60-63, 65-74, 89-91, 93-95, 98, 100, 102 and 187-197 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 9-13 of U.S. Patent No. #4,694,490. Although the conflicting claims are not identical, they are not patentably distinct from each for the following reasons:**

- 1) Applicants continues to allege that claims **56-58, 60-63, 65-74, 89-91, 93-95, 98, 100, 102 and 187-197** of the instant application are directed to 1981 subject matter disclosed in the 1981 parent specification and are therefore, so it is alleged, entitled to the 1981 filing date of said parent application;
- 2) If it is assumed that applicants' allegation is true, then it becomes apparent that claims **56-58, 60-63, 65-74, 89-91, 93-95, 98, 100, 102 and 187-197** of the instant application and claims **9-13** of US Patent #4,694,490 are necessarily be directed to the same 1981 "Wall Street Week" embodiment of the 1981 specification in which locally generated images were overlaid onto received video. The description of this 1981 "Wall Street Week Embodiment" is, however, quite limited [e.g. NOTE: That which is described, for example, in lines 5-68 of

column 19 and lines 1-7 of column 20 of US Patent #4,694,490; and APPENDIX I attached hereto];

3) Claims 9-13 of US Patent #4,694,490 are written in *means-plus-function* format and therefor are assumed to invoke a section 112-6 claim interpretation. That is, each of the recited "means" of claims 9-13 is presumed to be limited specifically to the structure described in the 1981 specification as having performed the recited function and equivalents thereof.

4) When the "means" of claims 9-13 of US Patent #4,694,490 are interpreted according to 112-6 based on the 1981 specification, it seems apparent that the "means" of these claims encompass all of the disclosed receiver side structure and processing thereof (and equivalents thereof); i.e. given the limited description of 1981 "Wall Street Week" embodiment that is provided by the 1981 specification. That is, referring to figure 6C of the 4,694,490 patent, note that claims 9-12 of said patent include the following recitations:

- a) "Mean for demodulating" the output of a carrier transmission receiving means to detect a video program signal;
- b) "Decoder means for determining" the presence/absence of an instruct-to-overlay signal;
- c) "Computer means for generating and transmitting" overlay signals;
- d) "Means connected to said computer means and responsive to said decoder means ... for coupling said overlay signals" to the TV receiver;
- e) "Means connected to said computer means for selectively updating said overlay signals".

5) Being that the recitations of claims **56-58, 60-63, 65-74, 89-91, 93-95, 98, 100, 102 and 187-197** of the instant application must necessarily find support from the same limited 1981 descriptions, i.e. given applicants' claim to the 1981 filing date, it seems apparent that claims **56-58, 60-63, 65-74, 89-91, 93-95, 98, 100, 102 and 187-197** the instant application cannot be patently distinct from the "means" recited in claims 9-13 of US Patent #4,694,490 given the above. That is, while claims **56-58, 60-63, 65-74, 89-91, 93-95, 98, 100, 102 and 187-197** of the instant application positively recite steps which are not explicitly recited in claims 9-13 of US Patent #4,694,490, it appears

that these recited steps are implicit in the recited "means" of the patented claims given the limited 1981 disclosures. This position also seems to be supported by the fact that, in responding to the section 120 priority issue, applicants often argue that while recitations of the instant claims find *explicit* support in the 1987 specification, they find *implicit* support in the 1981 parent specification (i.e. that the processing that is described in the 1981 parent specification implicitly comprised ones of the currently recited steps). Obviously, to the extent that the claims 9-13 recite this same described 1981 processing, the recitations also include the same alleged implicit steps.



**E-44)** The art of record has been applied to the claims to the extent of the examiner's understanding given the section 112 problems which have been noted above.

**E-45)**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

**E-46)** Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID E HARVEY whose telephone number is (703) 305-4365. The examiner can normally be reached on M-F from 9 AM to 6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached on 703 305-4380. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DAVID E HARVEY  
Primary Examiner  
Art Unit 2614

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08/470571  
#52

**APPENDIX I:** (The 1981 and 1987 CIP "WALL STREET WEEK" applications)

**The respective 1981 and 1987 "Wall Street Week" embodiments of the discarded 1981 parent specification and the instant 1987 CIP specification:**

**A) The 1981 "Wall Street Week" application:**

The 1981 "Wall Streets Week" application was described with respect to figure 6c of the 1981 specification, via columns 19 and 20 of the specification as contained in U.S. Patent #4,694,490 [namely, column 19, line 31 to column 20, line 11]. As described in this 1981 specification:

- 1) The 1981 microcomputer (205) of the 1981 receiver station operated to receive each day, via a digital information channel, all closing stock prices applicable that day. This receiving step was accomplished directly from the digital channel or by automatic query to a data service. In either case, the 1981 microcomputer (205) recorded the stock prices that pertained to its stored stock portfolio;  
[SEE: lines 35 –41 of column 19]
- 2) The 1981 microcomputer (205) was pre-programmed to respond to the 1981 instruction signals that were transmitted in the "Wall Street Week" program transmission;<sup>1</sup>  
[SEE: lines 41-44 of column 19].
- 3) At the beginning of the 1981 "Wall Street Week" program transmission, the 1981 decoder (203) of the 1981 receiver detected several instruction signals embedded in the programming transmission and transferred these detected instruction signals to the 1981 pre-programmed microcomputer (205). These received instruct signals instructed the 1981 microcomputer to generate several overlays being that the 1981 microcomputer had been provided with the means to generate such overlays. Said 1981 microcomputer (205) was also provide with the means to supply these generated overlays to the 1981 TV set (202) when commanded to do so. The 1981 TV set (202) was provided with the means to display the provided overlays.  
[SEE: lines 45-53 of column 19]
- 4) Within the 1981 "Wall Street Week", i.e. subsequent to the beginning, the host says, "Here is what the Dow Jones Industrials did this past week," and a studio generated graphic is pictured/transmitted. The host then says, "Here is what the broader NASDAQ did," and a studio generated graphic overlay is displayed on top of the pictured/transmitted first graphic.

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<sup>1</sup> The "preprogramming" of the 1981 microcomputer represents an extremely significant difference between the 1981 and the 1987 "Wall Street Week" applications. In the 1987 application, the 1987 embedded instruction signals provided the software that was used to program the microcomputer of the 1987 embodiment on the fly [e.g. note lines 1-21 on page 24 of the instant 1987 specification]

Then the host says, "Here is what your portfolio did." At this point a 1981 instruction signal was generated at the originating studio and transmitted in the programming. This transmitted instruction signal was identified at the 1981 receiver station by the 1981 decoder (203) and then transferred, via the 1981 processor (204) to the 1981 microcomputer (205). This 1981 instruction signal instructed the 1981 microcomputer (205) to transmit a first generated overlay to the 1981 TV set (202) for as long as the microcomputer (205) received the same instruction from the processor (204). As a result of this process, the user sees the 1981 microcomputer generated graphic of his own stock's performance overlaid on the studio generated graphic. When the studio generated graphics are no longer displayed, the 1981 studio simply stopped sending the 1981 instruction signal. This caused:

- a) The 1981 microcomputer (205) to cease transmitting its own graphic to the 1981 TV set (202); and
- b) The 1981 microcomputer (205) to prepare to send a next locally generated graphic overlay to the 1981 TV set (202) upon instruction from the studio.

[SEE: the description that starts on line 53 of column 4 and extend to line 7 of column 20]

**B) The instant 1987 CIP "Wall Street Week" application:**

The 1987 "Wall Streets Week" application is *initially* described (i.e. introduced) by the instant 1987 specification, with respect to figure 1 of the 1987 specification, and via pages 19-28 thereof. Further details/discussions of this 1987 "Wall Street Week" application are found throughout the 1987 specification. Simply by volume of description, it is immediately apparent that the description of the 1987 "Wall Street Week" application has, in the words of applicants, been extensively "expanded", "enhanced", "improved" when compared to the description of the 1981 "Wall Street Week" application of the discarded parent specification. The true magnitude to which the 1987 descriptions have been "expanded"/"enhanced"/"improved" starts to emerge when one compares the 1987 descriptions as exemplified below with the scant 1981 description that have been cited above. That is, as described in the instant 1987 CIP specification:

- 1) The 1987 microcomputer (205) of the 1987 receiver station includes a 5 ¼" floppy disk at a designated one of its disk drives that holds a data file, wherein this data file contains "information" on a portfolio of "financial instruments" owned by the "subscriber". This stored "information" of financial instruments identifies the particular stocks owned by the subscriber, the number of shares of each stock that are owned by the subscriber at the close of each business day, and the closing share prices applicable each day;  
[SEE: lines 5-14 on page 21 of the instant 1987 CIP specification]
- 2) The 1987 decoder (203) which is itself preprogrammed to detect digital information on a particular line or lines in the VBI of video programming received thereat. In addition to detecting the information, the 1987 decoder is preprogrammed to correct errors in the detected information, to convert the information into digital signals that are usable by the 1987 microcomputer (205), and to input said so produced digital signals to the asynchronous communications adaptor of said 1987 microcomputer (205).  
[SEE: lines 14-24 on page 21 of the instant 1987 CIP specification]
- 3) At the beginning of a 1987 "Wall Street Week" programming transmission, the 1987 originating studio generates and embed "a first series of control instructions" wherein the instructions of this first series are addressed to, and control, the 1987 microcomputer (205) of each 1987 subscriber station.  
[SEE: lines 1-8 on page 22 of the instant 1987 CIP specification]
- 4) A tuner (215) of the 1987 receiver receives the "Wall Street Week" transmission and converts it into a received video and audio signal. The video component is then divided by the 1987 divider and is supplied to

both an input of the 1987 microcomputer (205) and the input of the 1987 decoder (203).<sup>2</sup>

[SEE: lines 19-27 on page 22 of the instant 1987 CIP specification]

5) The "first set of instruction commands", i.e. presumably from said "first series of control instructions", causes the 1987 microcomputer (205) at each of the 1987 receiver stations to interrupt the operation of its CPU, and any other designated processor contained therein, so as to effect a "warm boot." This first set of instruction commands being labeled "control invoking instructions" by the 1987 CIP specification.<sup>3</sup>

[SEE: line 28 of page 22 to line 26 of page 23 in the instant 1987 CIP specification]

6) Subsequent to transmission of the first set of embedded instructions, a "second set of instructions" is embedded at, and transmitted from said 1987 program originating studio. This second set is received by the 1987 decoder (203) at each 1987 receiver station where it is detected and converted into usable digital signals which are provided to the 1987 microcomputer (205). The 1987 microcomputer evaluated the initial word(s) therein which instruct the 1987 microcomputer to load and run "the information of a particular set of instructions" that follow the initial word.

[SEE: line 35 on page 23 to line 10 on page 24 of the instant 1987 CIP specification]

This 1987 "set of instructions", the one that is loaded and run by the 1987 microcomputer (205), receives the label "program instruction set" and comprises downloaded program related "computer software" pertaining to the specific program into which it was embedded (namely, the 1987 "Wall Street Week" application).

[SEE: line 5 on page 24 to line 8 on page 25 if the instant CIP specification]

7) The 1987 microcomputer (205) at each of the 1987 receiver stations runs this downloaded software which causes the 1987 microcomputer (205) to process said "information" that was stored as a data file on its 5 1/4" floppy disc and to generate and store graphic image data that is then

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<sup>2</sup> While elements of the 1981 and 1987 specification share common labels and reference numerals, they are by no means the same in structure of operation. For example, the 1987 microcomputer (205) receives the video signal from the 1987 divider (4) because it was the 1987 microcomputer which operated to overlay its locally generated graphics on the received video whereas, in contrast, the 1981 microcomputer (205) did not receive the video signal because it was the 1981 TV set which operated to overly the locally generated graphics from the 1981 microcomputer (205) over the received video signal; i.e. clearly, the 1987 microcomputer (205) is different from the 1981 microcomputer (205).

<sup>3</sup> The apparent interchangeable use of the "command" and "instruction" terminology here begs to question whether there is any difference between "a command" and "an instruction".

stored within the RAM the 1987 microcomputer's graphic card; i.e. the image that is shown in figure 1A of the 1987 specification which comprises "a line" on a transparent/"black" background. Once the graphic is generated and stored, the 1987 microcomputer (205) commences waiting for further instructions to be provided from the 1987 decoder (203). [SEE: line 22 on page 24 to line 22 on page 25 of the instant 1987 CIP disclosure]

8) Subsequent to the generation of the graphic image data at the 1987 receiver stations, the host of the "Wall Street Week" program says, "Now as we turn to the graphs, here's what the Down Jones Industrials did in the week just past," and a 1987 studio generated graphic, i.e. that of figure 1B of the 1987 specification, is transmitted. Then the host says, "And here is what your portfolio did." At this point an "instruction" signal is generated at the 1987 originating studio, embedded in the "Wall Street Week" programming, and transmitted to the 1987 receiving stations. [SEE: line 23 on page 25 to line 1 on page 26 of the instant 1987 CIP specification]

9) This last named 1987 "instruction signal" is identified by the 1987 decoder (203), is transferred to the 1987 microcomputer, and is "executed" by the 1987 microcomputer (205) as a "Graphic On" signal. At this point the 1987 microcomputer itself overlays its generated graphic stored in its graphic card onto the video signal received from the 1987 divider (4), e.g. via the 1987 microcomputer's (205) "PC-Microkey 1300", to generate a combined video presentation that is provided to a 1987 TV monitor (202M).

[SEE: lines 1-11 on page 26 of the instant 1987 CIP specification]

This last named "Graphic On" *instruction signal* being labeled a "combining sync command" due to the fact that it synchronized the combining operation at the receiver stations.<sup>4</sup>

[SEE: lines 20-24 on page 26 of the instant 1987 CIP specification]

10) At some subsequent point in time a "further instruction signal" is generated, embedded, and transmitted to the 1987 receiving stations wherein this "further instruction signal" is executed as a "Graphics Off" signal. This caused the 1987 microcomputer (205) to cease the overlaying of its generated graphic.<sup>5</sup>

[SEE: line 33 on page 26 to line 9 on page 27 of the instant 1987 CIP specification]

<sup>4</sup> Again, there seems to be no difference in the way "command" and "instruction" are being used (i.e. they seem to be used interchangeably).

<sup>5</sup> This represents another clear difference between the 1987 and 1981 embodiments. That is, in the 1981 embodiment one continuously transmitted instruction signal was used to identify the beginning and end of the overlay period whereas in the 1987 embodiment a first instruction signal marked the beginning and a second instruction signal marked the end of the overlay period.

**C) The respective 1981 and 1987 signaling of the respective 1981 and 1987 "Wall Street Week" applications:**

**1) The discrete 1981 "Signal Units" and "Signal Words" signaling technology of the 1981 "WALL STREET WEEK" application:**

With respect to the 1981 systems, all of the 1981 instruction, identification, and information signals that were embedded within the VBI of the TV programming appear to have been simple discrete digital codes that were to be located and identified on the receiving side of the system in order to trigger/cue a corresponding response thereto. These simple codes were labeled: "signal units". Not surprisingly, a simple transmission scheme comprised of "signal words" was used by the 1981 systems to convey these "signal units" as embedded data through the 1981 transmission networks.

That is, to transmit the 1981 "signal units", the bits from one or more "signal unit" were organized into one or more discrete strings of bits. Each of these discrete bit strings was then embedded, at a respective discrete time and/or location, within the transmitted TV programming as a "signal word". Specifically, as defined and used within the 1981 specification, each "signal word" represented a respective occurrence/"appearance" of ancillary signaling within the distributed programming:

**"The term 'signal word' hereinafter means one full discrete appearance of a signal as embedded at one of time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. Such strings may or may not have predetermined data bits to identify the beginnings and ends of words. Signal words may contain parts of signal units, whole signal units, or groups of partial and whole signal units or combinations" <sup>6</sup> [note lines 3-12 of column 3 in US Patent #4,694,490]**

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<sup>6</sup> "The term 'signal units' hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a unique purchase order number identifying the prior use of a programming unit, or a general instruction identifying whether a programming unit is to be retransmitted immediately or recorded for delayed transmission." [note: lines 64-68 of column 2 and lines 1-3 of column 3 in US Patent #4,694,490; and lines 25-32 of the instant disclosure]

**2) The discrete 1987 "SPAM" packet signaling technology of the 1987 CIP "WALL STREET WEEK" application:**

The 1987 instruction and information signals that were embedded in the VBI of the TV programming of the 1987 systems were not limited to simple digital codes as in the 1981 inventions. Most notably, the 1987 instruction signals explicitly included long sequences of assembled machine code representing computer software.

Clearly, such 1987 instruction and information code sequences was not conducive to being handled and transmitted as 1981 "Signal Units"/"Signal Words" and indeed, as is evident by the 1987 CIP disclosure, it was not. To the contrary, the 1987 CIP specification introduces a new sophisticated transmission packets structure, i.e. the 1987 "SPAM" packet structure of figures 2E-2K of the 1987 specification, which appears to be the "real" mechanism by which the 1987 instruction, identification, and information signals were (and had to be) conveyed within the programming.

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> Here, it must be noted that the 1981 definition of "signal word" has been inserted into the "summary" section of the instant 1987 CIP specification [SEE: line 25 on page 14 to line 6 on page 15 of the instant 1987 specification]. In fact, not only has this 1981 "signal word" definition been inserted into the 1987 CIP specification, but some effort has been made early in the 1987 CIP specification to:

- a) Suggest that the 1981 "signal word" technology might be used in some undefined manner convey all of the 1987 instruct and information signaling, e.g. including 1987 "computer software", through the 1987 networks as an alternative to the disclosed 1987 "SPAM" packet transport mechanism; and/or
- b) Suggest that the 1987 "SPAM" transport mechanism actually comprises the 1981 "signal words" in a way that is never defined, described, addressed, or developed within the 1987 CIP disclosure.  
[e.g. note line 1-6 on page 22 of the instant 1987 CIP specification]

Regardless of motive, the examiner maintains that the presence of the 1981 "signal word" terminology within the 1987 CIP specification is a red herring for the following reasons:

A) The 1987 specification never explains how the 1981 "signal word"/ "signal unit" technology was, or even could be used, to convey the long sequences of digital code which comprised the 1987 CIP instruction, identification, and information signals. That is while the described 1981 "signal word" technology seems more than adequate to handle the transmission of the simple 1981 digital codes that comprise the auxiliary signaling of the 1981 inventions, this 1981 technology seems woefully inadequate to handle the longer sequences of data (i.e. the "computer software") which comprised the 1987 instruction and information signals given:

- 1) The rigid synchronous format of the 1981 "signal words"; and
- 2) The fact, because of this synchronous format, that all the 1981 microcomputers on the receiving side of the 1987 system had to be preprogrammed so as to know exactly where to look for the digital code(s), or fragments thereof, that were to be received (i.e.: as to which bit locations of which "signal word" appearances each digital code, or fragment thereof, was to be found).

*[The more sophisticated asynchronous nature of the 1987 SPAM transport scheme effectively eliminates this problem];*

B) Since the 1981 "signal word" technology is woefully inadequate to handle the 1987 signaling, then it would seem that the described 1987 "Wall Street Week" application discussed above has serious section 112-1 problems and, thus, that claims supported therefrom should be rejected under section 112-1 accordingly. However, this is not true, because the 1987 CIP specification effectively removes such 112-1 issues via its subsequent descriptions in which the 1987 disclosure makes it clear that it is the 1987 "SPAM" packet signals, and not the 1981 "signal words", that are actually being used as the transport mechanism for the 1987 inventions. For example:

1. First, immediately following the above noted 1987 "WALL STREET WEEK" description, the 1987 CIP specification introduces and describes a new 1987 "SPAM" packet technology that is clearly capable of handling the long sequences of code which comprise the new 1987 signaling; and

2. After introducing this new "SPAM" technology, the 1987 CIP specification continues its description of the 1987 "Wall Street Week" application in a way which not only incorporates the initial 1987 discussion of the application that was cited above, but which leaves no doubt that it is the new "1987 SPAM" technology that is being utilized by this 1987 "Wall Street Week" application [SEE lines 7-24 on page 354 of the 1987 CIP specification];

C) The 1981 definition of "signal word" not only defines the term "signal word" to have an unconventional 1981 meaning, but explicitly indicates that this unconventional 1981 definition will be adopted and used consistently, thereafter, throughout the disclosure.

**"The term 'signal word' hereinafter means one full discrete appearance of a signal as embedded at one of time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. Such strings may or may not have predetermined data bits to identify the beginnings and ends of words. Signal words may contain parts of signal units, whole signal units, or groups of partial and whole signal units or combinations"** (emphasis added)  
[note lines 3-12 of column 3 in US Patent #4,694,490]

The 1981 disclosure is true to the 1981 "signal word" definition in that the "signal word" terminology was actually used throughout the *discarded* 1981 specification in this explicitly defined unconventional manner.

This same 1981 "signal word" definition was carried forward into the "summary" section of the instant 1987 CIP specification too [e.g. note lines 52-61 in column 8 of US patent #5,233,654]. However, in the case of the instant 1987 disclosure, the reproduced 1981 "signal word" definition was true to the definition in that throughout the remainder of the 1987 CIP disclosure the "signal word" terminology was not used as defined but was, instead, used

in a conventional manner to refer to bytes of digital data. This fact further shows/suggests that the 1981 "signal word" definition from the 1981 specification was "cosmetically" copied into the instant 1987 CIP specification; i.e. that the 1981 definition of "signal word" is out of place within the context of the 1987 disclosure and, more particularly, the "present invention" described therein.

D) The instant 1987 CIP specification explicitly defines the 1987 "SPAM" acronym to be:

**"Signal Processing Apparatus and Methods of the present invention"** (emphasis added)  
[e.g. note page 40 of the instant 1987 CIP specification]

That is, **by definition**, the "SPAM" acronym actually refers to the SPAM systems and methods described in the 1987 CIP specification that comprise its "present invention". And what discrete signals do 1987 "SPAM" systems and methods utilize? Obviously, they utilize the "SPAM signals" that are also described therein - the "signals" of said SPAM ("Signal Processing Apparatus and Methods of the present invention").

Said "SPAM signals" of the "SPAM" systems/methods being those that are explicitly shown and described with respect to figures 2E-2K of the instant 1987 specification.

Thus, the 1987 "SPAM" acronym itself, as coined by and used throughout the 1987 specification, provides an explicit indication that the "present invention" of the 1987 CIP specification pertained to the "SPAM" system/methods and the discrete "SPAM" signaling described therein.

Given the above, it is maintained that the section 112 support for the "discrete"/"embedded"/"instruct"/"command"/"control" signal recitations of the pending claims comes, necessarily, from the 1987 "SPAM signals" of figures 2E-2K and not from the 1981 "signal word" (or definition thereof) as has been alleged by applicant's when attempting to establish section 120 priority back to the 1981 effective filing date. [SEE, for example, item "47" on page 18 of Exhibit II in the response filed 1/9/203 in 08/470,571].

**XXX**

**APPENDIX II: (SECTION 120 PRIORITY AND CASE LAW)**

**A. Applicants' claim to the 1981 priority date under Section 120, whenever alleged, should be based on the "adequate written description" requirement of Section 112-1 which has been incorporated into Section 120 (as opposed to the "anticipation" standard provided for under Section 102):**

1) Section 120 provides a tool whereby claims of a second application are entitled to the earlier filing date of a first application with, and only with, respect to "common subject matter." That is, the filing date of the first application is preserved in the second application only for that subject matter described in the second application that was previously described in the first application. Section 120 does not provide an avenue whereby the subject matter described in the first application is magically carried forward into the written description of the second application (i.e. the written description of the second application must incorporate the description from the first application either physically or by reference). Nor does section 120 provide an avenue for surreptitiously adding new matter to an existing written description without the loss of the original filing date with respect to the added "new matter."<sup>7</sup>

**"Section 120 merely provides mechanism whereby application becomes entitled to benefit of filing date of earlier application disclosing same subject matter; common subject matter must be disclosed in both applications, either specifically or by express incorporation by reference of prior disclosed subject matter; nothing in Section 120 itself operates to carry forward earlier application; it contains no magical disclosure – augmenting powers able to pierce new matter barriers; therefor, it cannot "limit" absolute and express prohibitions against new matter contained in Section 251."**

**[Dart Industries, Inc. v. Banner, Commissioner of Patents and Trademarks, (CA DC), 207 USPQ 273]**

It is unclear as to how much (if any) of the subject matter that was described in the 44 pages of applicant's 1981 parent application was actually carried forward into the 557 pages of the instant 1987 CIP specification in a form that does not constitute "New Matter". That is, it is unclear as to which (if any) of the currently pending claims are directed *solely* to subject matter from the 1981 specification that has been carried forward into the instant 1987 specification. The reason for the confusion stems from the fact that:

- (1) The 1981 parent specification was not incorporated into the 1987 specification formally or in any immediately discernible fashion;

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<sup>7</sup> Wherein "new matter" is, by definition, "matter involving a departure from or in addition to the original disclosure" [37 C.F.R. 1.118]

(2) Those portions of the 1987 descriptions which look as though they might have originated from the 1981 parent specification have themselves been thoroughly intermixed with new 1987 subject matter during their migration to the 1987 specification that they too appear to constitute "new matter"; and

(3) Applicants make no attempt to show that any of the pending claims are directed *solely* to subject matter described in the instant 1987 CIP specification that was previously described in their 1981 parent specification; i.e. to prove that the subject matter now being claimed is in fact "common subject matter". Instead, applicants have elected:

(a) To submit parallel 1981 and 1987 citations of alleged section 112-1 support for each of the claim in question, wherein these parallel 1981 and 1987 citations point to different 1981 and 1987 subject matter from the 1981 parent and 1987 CIP specifications; and

(b) To argue that the examiner's position concerning the need for a showing of "common subject matter" under section 120 to be wrong.

That is, all of applicants' attempts to establish section 120 "priority" back to the 1981 parent specification for the pending amended claims in question, appear to be based on an erroneous standard. Namely, applicants have presented showings that do not even attempt to present the standard of proof that is needed to establish priority under section 120. That is, providing evidence that given claims meet the requirements of section 120 is a "burden" that falls to applicant (and not the examiner) whenever "priority" under section 120 is alleged by the applicants.

**"A party who, like Hiraga, relies on an earlier-filed application under 35 U.S.C. 119 or 120 has the burden to show that the foreign or patent application supports later-added claims under 35 U.S.C. 112-1"**

**[Utter v. Hiraga 6 USPQ 2d 1709, 1713 (Fed. Cir. 1988)]**

2) Applicants continue to allege that the written description requirement of section 112-1, e.g. that which has literally been incorporated into section 120, permits applicants to obtain priority to the 1981 effective filing date of the parent application by demonstrating that each pending amended claim, i.e. each claim that for which the 1981 date is sought, can be given respective 1987 and 1981 claim interpretations which permit the claim to be read, separately, on different

1987 and 1981 subject matter from the different 1987 and 1981 specifications. Specifically, applicants have taken the positions: (1) that there is nothing in Section 120 which requires the respective 1987 and 1981 written descriptions being relied upon for establishing "priority" to be the same and/or equivalent; and (2) that, being such, it is improper for the examiner to compare the respective 1981 and 1987 disclosures being relied upon to determine whether or not it is "common subject matter".

**"[Section] 120 does not require an applicant to demonstrate that the disclosures relied upon under §120 have anything in common besides their ability to separately comply with §112-1 with respect to the claims for which priority is sought. Accordingly, the Examiner's focus on comparing the support from the two applications for similarity or common subject matter is improper and irrelevant because all applicants are required to do is satisfy §120 is show that each disclosure meets the requirements of §112-1 for a given claim."** (emphasis added)

[Page 141 of applicant's response filed on 1/28/2002 in application S.N. 08/470,571]

**"Accordingly, the law requires a two part test in which the applicant separately demonstrates § 112 support for each application. In the FOA, the examiner distorts this straightforward test by imposing a third element of the test whereby the § 112 support from each application consists of 'common subject matter.'"**

[see the last 10 lines on page 137 of the response filed on 1/28/2002 in SN 08/470,571].

The examiner continues to disagree with applicants' positions. Specifically, the examiner notes:

(A) That the need to compare the disclosure of the CIP application with that of the parent application, to ensure that "common subject matter" is being claimed, is a necessary inquiry that must be made when determining the validity of an allegation to "priority" made under section 120.

**"The inquiry required by section 120 demands a comparison of 1) the claims of the parent and CIP applications and 2) any other disclosures made in the applications such as specification and drawing. Acme Highway, supra, at 1079, 167 USPQ at 132-33." [Stern v. Superior Distributing Company et al., (CA 6), 215 USPQ 1089 at 1094]**

(B) That, in taking the positions cited above, applicants appear to have confused the showing that is needed for "anticipation" under section 102

(where a showing of "common subject matter"/"the same invention" is not required) with the showing that is needed to establish "priority" to an earlier filing date under section 120 (where a showing of "common subject matter"/"the same invention" is required).

(C) The mere fact that a claim can be broadly drafted in a subsequent CIP application so as to "generically" read on different subject matter from an earlier filed parent application too (i.e. to be "anticipated" within the meaning of section 102) does not necessarily mean that said claim is entitled to the earlier filing date of the parent [note: Tronzo v. Biomet Inc., (CA FC), 47 USPQ2d 1829]. Hence, applicants' parallel citations of alleged claim support that are based on different 1987 and 1981 subject matter, at best, only established the fact that the claims are "anticipated" by the respective 1981 and 1987 disclosures in a section 102 sense. The parallel citations do not establish the fact that the claims are supported by "common subject matter" found in both specifications as is actually required for section 120 priority.

3) Throughout the present prosecution, the examiner has noted many differences and *inconsistencies* that exist between applicants' instant 1987 CIP specification and applicants' 1981 parent specification. For example: *a*/*ll* of the "systems and methods" that are described in the 1987 disclosure utilize 1987 "control and instruct signaling" that conveys an "expanded"/broadened range of information including, most significantly, downloadable software; b) The meaning and definitions explicitly given to terminology that is used to describe the 1987 systems/methods in the 1987 specification has itself been "expanded"/broadened with respect to the same terminology used to describe the 1981 systems/methods in the 1981 disclosure, thereby *quietly* imparting "expanded"/broadened meaning to most (if not all) of the 1987 descriptions [e.g. terms such as "programming", signal "words", etc, ...]; c) *A*/*ll* of the 1987 systems/methods utilize the more advanced 1987 "SPAM" transmission packet technology which enables the 1987 systems and methods to dynamically transport carry the "expanded"/broader form 1987 "control and instruct signals" (i.e. "software"), and enables the 1987 systems/methods to operate within a "expanded"/broader range of disclosed communication system environments [i.e. the 1987 systems and methods are explicitly described within environments outside radio and television whereas the previously described 1981 systems/methods were not). These "expanded"/broadened descriptions expand and broaden the descriptions of *all* of the 1987 systems/methods within the instant 1987 CIP specification to a point where the 1987 descriptions themselves appear to constitute "new matter" (with respect to the 1981 parent). The following is noted:

**"In 1967, the Court of Custom and Patent Appeals first separated a new written description (WD) requirement from the enablement requirement**

**of [Section] 112. The reason for this new judge-made doctrine needs some explanation. Every patent system must have some provision to prevent applicants from using the amendment process to update their disclosures (claims or specification) during their pendency before the patent office. Otherwise applicants could add new matter to their disclosures and date them back to their original filing date, thus defeating accurate accounting of the priority of invention."**

[Enzo Biochem Inc. v. Gen-Probe Inc. 63 USPQ2d 1618,1624 (CA FC 2002)]

**"New matter is matter involving a departure from or in addition to the original disclosure"**

[37 C.F.R. 1.118]

**"To the extent that a CIP application adds new matter, claims that are dependent upon the new matter are entitled to the filing date of the CIP only and not that of the parent application"**

[Stern v. Superior Distributing Company et al., (CA 6), 215 USPQ 1089 at 1094]

**"A continuation-in-part application is not entitled to the benefit of the earlier filing date of its parent application where the changes included within subsequent applications are 'new matter' which either alters the substance of the invention or makes the composition an invention for the first time, as opposed to the situation in which the subsequent application merely contains either a language change not effecting the meaning of the prior application or a specification which narrows the scope of that which was previously claimed.**

[Indiana General Corp. v. Krystinel Corp., 161 USPQ 82, 94-95]

And, because the specification of the 1981 parent application was not carried forward during the drafting of the 1987 CIP, it is the "new" written description of the 1987 CIP systems and methods alone which must describe that which is now claimed in accordance with requirements of 112-1; i.e. necessarily making that which is now claimed the much improved/enhanced/expanded 1987 systems and methods of the 1987 CIP specification. Why should/would these improved/enhanced/expanded 1987 CIP systems and methods be entitled to the 1981 filing date of the lesser 1981 systems and methods whose descriptions were literally left behind during the drafting of the instant 1987 CIP specification? In any event, by electing to leave the 1981 written description behind during the drafting of the instant 1987 CIP, applicants have not only forfeited their right to now claim any 1981 subject matter that is determined not to have been carried forward into the 1987 CIP, but applicants have made "their" burden of establishing proof of section 120 priority a heavy one indeed. That is, by failing to incorporate the 1981 description into the 1987 CIP application, applicants need to prove (as opposed to allege) that that which is now claimed is directed solely

to 1981 systems and methods from the discarded 1981 specification whose descriptions have actually been carried forward into the 1987 CIP.

4) In reviewing case law, one finds that the courts have warned everyone again and again not to confuse the issue of "anticipation" under section 102 with the issue of adequate "written description" under section 112-1 as incorporated into section 120. To this point, when current applicants show that the recitations of a given claim can be separately read on different subject matter from their two very different 1987 and 1981 specifications<sup>8</sup>, applicants have at best only established the fact that the given claim's recitations are in some way "anticipated" by different 1987 and 1981 subject matter. Such a showing fails to establish priority under section 120. Namely, applicants have failed to establish, as fact, that the "subject matter" being claimed comprises "common subject matter" that is "adequately described" in accordance with section 112-1 by both the 1987 and the 1981 disclosures:

**"However, as mentioned earlier, a continuing application is entitled to rely on the earlier filing date of an earlier application only with respect to subject matter common to both applications"** (emphasis added)  
[In *Transco Products, Inc., v. Performance Contracting, Inc.*, 32 USPQ2d 1077 [\*\*18]]

**"Any claim in a continuation-in-part application that is directed solely to subject matter adequately disclosed under 35 U.S.C. 112 in the parent application is entitled to the filing date of the parent application."**  
[In *Transco Products, Inc., v. Performance Contracting, Inc.*, 32 USPQ2d 1077 [\*\*18]]

**"Assuming the common inventorship, copendency, and cross-reference required by section 120, that section further requires only that the invention be disclosed in the parent application in such manner as to comply with the first paragraph of section 112 and be the same invention as that disclosed in the later application."** (emphasis added)  
[Kirschner, 305 F.2d 897 (C.C.P.A 1962)]

5) Again, turning to the case law, it is seems quite apparent that whenever a claim for priority under section 120 is made to an earlier filed application in a Continuation-In-Part (CIP) application, the validity of the claim is determined in the following manner:

A) First, the court turns to the disclosure of the CIP application in order to determine precisely what the "subject matter" is that is being claimed.

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<sup>8</sup> i.e. the instant 1987 CIP disclosure and the past 1981 disclosure of the parent.

Namely, in accordance with section 112-1, the CIP disclosure must provide a "description" of that which is being claimed by the claims in the CIP application and, therefor, the court turns to said CIP specification to locate the required description of that which is claimed; and

B) Having determined from the CIP application precisely what the described "subject matter" is that is being claimed, the court then turns to the disclosure of the parent application to determine whether this same "subject matter" was previously described in disclosure of the parent application in the same or equivalent fashion. Only if the answer to this determination is "yes" is priority to the filing date of the parent accepted/established.

As can be seen, the process used by the courts effectively compares the disclosure of the CIP application with the disclosure of the parent application to ensure that the invention that is described/claimed in the CIP application is the same subject matter that was previously described in the parent application.

**"The Inquiry required by section 120 demands a comparison of 1) the claims of the parent and CIP applications and 2) any other disclosures made in the applications such as specification and drawing. Acme Highway, supra, at 1079, 167 USPQ at 132-33."**

**[Stern v. Superior Distributing Company et al., (CA 6), 215 USPQ 1089 at 1094]**

The above process/standard applied by the courts is, however, far different from the process/standard/showings put forth by applicants. According to applicants, one establishes section 120 priority by *blindly* identifying separate 1987 and 1981 grounds of alleged "claim support" wherein the respective grounds of claim support may be based on vastly different subject matter described in the respective specifications:

**"[Section] 120 does not require an applicant to demonstrate that the disclosures relied upon under §120 have anything in common besides their ability to separately comply with §112-1 with respect to the claims for which priority is sought. Accordingly, the Examiner's focus on comparing the support from the two applications for similarity or common subject matter is improper and irrelevant because all applicants are required to do is satisfy §120 is show that each disclosure meets the requirements of §112-1 for a given claim."**

**(emphasis added)**

**[Page 141 of applicant's response filed on 1/28/2002 in application S.N. 08/470,571]**

**"Accordingly, the law requires a two part test in which the applicant separately demonstrates § 112 support for each application. In the FOA, the examiner distorts this straightforward test by imposing a third**

**element of the test whereby the § 112 support from each application consists of 'common subject matter.'**

[see the last 10 lines on page 137 of the response filed on 1/28/2002 in SN 08/470,571].

As currently understood by the examiner, it appears that applicants have failed to heed the warnings of the court and have confused the issue of "anticipation" under section 102 (i.e. where a showing of "common subject matter" is not required) with the issue of "adequate written description" of section 112-1 as literally incorporated into section 120 (i.e. where a showing of "common subject matter" is unquestionably required).

6) Again, applicants take the position that there is nothing in section 120 which requires the respective 1987 and 1981 written descriptions relied upon to be the same and/or equivalent.

**'[Section] 120 does not require an applicant to demonstrate that the disclosures relied upon under §120 have anything in common besides their ability to separately comply with §112-1 with respect to the claims for which priority is sought. Accordingly, the Examiner's focus on comparing the support from the two applications for similarity or common subject matter is improper and irrelevant because all applicants are required to do is satisfy §120 is show that each disclosure meets the requirements of §112-1 for a given claim.'**

(emphasis added)

[Page 141 of applicant's response filed on 1/28/2002 in application S.N. 08/470,571]

If such a position were true, then there would be nothing in the law to prevent an inventor from "surreptitiously expanding a patent" through the filing of one or more CIP applications. Indeed, in such a world, one could describe and claim the proverbial "apples" in a later filed CIP application and obtain the earlier filing date of a parent application which only described the proverbial "oranges" via nothing more than the act of creative claim construction [i.e. as was noted in the *Interview Summary* of 6/29/00 (paper # 27) in SN 08/487,526]. However, preventing an inventor from improperly using section 120 in this fashion is one of the historical reasons why the "adequate written description" requirement of section 112-1 was incorporated into section 120 in the first place: e.g.

**"Unlike the enablement provision of section 112, where the disclosure of a single species might be sufficient to enable a practitioner skilled in the art to make and use any member of the genus,....., the written description requirement of section 112 requires more. See *Vas - Cath, supra*. This strict reading of the written description requirement prevents an inventor from surreptitiously expanding a patent through successive continuation-in-parts. See *Id.* At 1562. Essentially, it limits the claims of an applicant to those inventions he clearly discloses, either expressly or inherently"** (emphasis added)

[Tronzo v. Biomet Inc. (DC SFla) 41 USPQ2d 1403<sup>9</sup> citing Vas-Cath Inc. v. Mahurkar (CA FC) 19 USPQ2d 1111]

**"Section 120 merely provides mechanism whereby application becomes entitled to benefit of filing date of earlier application disclosing same subject matter; common subject matter must be disclosed in both applications, either specifically or by express incorporation by reference of prior disclosed subject matter; nothing in Section 120 itself operates to carry forward earlier application; it contains no magical disclosure – augmenting powers able to pierce new matter barriers; therefor, it cannot "limit" absolute and express prohibitions against new matter contained in Section 251."**

[Dart Industries, Inc. v. Banner, Commissioner of Patents and Trademarks, (CA DC), 207 USPQ 273]

**"A continuation-in-part application is not entitled to the benefit of the earlier filing date of its parent application where the changes included within subsequent applications are 'new matter' which either alters the substance of the invention or makes the composition an invention for the first time, as opposed to the situation in which the subsequent application merely contains either a language change not effecting the meaning of the prior application or a specification which narrows the scope of that which was previously claimed. [Indiana General Corp. v. Krystinel Corp., 161 USPQ 82, 94-95]**

**"In 1967, the Court of Custom and Patent Appeals first separated a new written description (WD) requirement from the enablement requirement of [Section] 112. The reason for this new Judge-made doctrine needs some explanation. Every patent system must have some provision to prevent applicants from using the amendment process to update their disclosures (claims or specification) during their pendency before the patent office. Otherwise applicants could add new matter to their disclosures and date them back to their original filing date, thus defeating accurate accounting of the priority of invention."**

[Enzo Biochem Inc. v. Gen-Probe Inc. 63 USPQ2d 1618,1624 (CA FC 2002)]

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<sup>9</sup> NOTE: this case was appealed [Tronzo v. Biomet (CA FC) 47 USPQ2d 1829]

The courts have also indicated the following:

**"To be entitled to the filing date of a previously filed application, appellant's application on appeal would have to satisfy the requirements of 35 U.S.C. 120, among which is the requirement that the subject matter now claimed be disclosed in a manner prescribed by the first paragraph of section 112 in the prior application. Since, to conform to section 112, claimed subject matter must be described in the specification relied upon, subject matter which is first introduced in a continuation-in-part application is not entitled to the filing date of the parent application"**

**[In re van Langenhoven, 173 USPQ 426 (CCPA 1972)]**

**"[The] bottom line is that, no matter what term is used to describe a continuing application, that application is entitled to the benefit of the filing date of an earlier application only as to common subject matter" [Transco Products Inc. v. Performance Contracting Inc. (CA FC) 32 USPQ2d 1077].**

**"In terms of the statute, 35 U.S.C. 120, this means that, for an application to be entitled to the benefit of the date of a previously filed, copending application such application must contain a written description of the invention claimed in the second application which complies with the first requirement of the first paragraph of 35 U.S.C 112 ..... However, as we said in In re Lukack, ...., 'the invention claimed [in the later application] does not have to be described [in the parent] in *ipsis verbis* in order to satisfy the description requirement of 112' ..... The question in cases in which the parent application does *not* contain language contained in the claims of the later application is whether the language which *is* contained in the parent application is the legal equivalent of the claim language, in the sense that the '*necessary and only reasonable construction* to be given the disclosure [in the parent application] by one skilled in the art' ..... is the same as the construction which such person would give language in claims of the later application."**  
**[WAGONER AND PROTZMAN v. BARGER AND HAGGERTY, 175 USPQ 85, 86 (CCPA 1972)].**

**"It must be understood that the introduction of a new best mode disclosure would constitute the injection of 'new matter' into the application and automatically deprive the applicant of the benefit of the earlier filing date of the parent or original application for any claim whose validity rests on the new mode disclosure"**

**[Transco Products Inc. v. Performance Contracting Inc. (CA FC) 32 USPQ2d 1077, 1083)]**

In Vas-Cath Inc. v. Mahurkar (CA FC) 19 USPQ2d 1111, 1114, it was noted that one might be inclined to question the purpose of a separate written description requirement of section 112 in view that "the invention" is in fact the subject matter that is defined by the *claims* being considered:

**"One may wonder what purpose a separate "written description" requirement serves, when the second paragraph of § 112 expressly requires that the applicant conclude his specification "with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention."**

Reasons for having the separate descriptive requirement, as noted in In Vas-Cath Inc. v. Mahurkar (CA FC) 19 USPQ2d 1111, 1115, included the following:

**1) An adequate written description of the invention provides a "warning an innocent purchaser, or other person using a machine, of his infringement of the patent;**

**and at the same time taking from the inventor the means of practicing upon the credulity or fears of other persons, by pretending that his invention is more than what it really is, or different from its ostensible objects, that the patentee is required to distinguish his invention in his specification"; and**

**2) An adequate written description of the invention "guards against the inventor's overreaching by insisting that he recount his invention in such detail that his future claims can be determined to be encompassed within his original creation."**

**[Vas-Cath Inc. V. Mahurkar (CA FC) 19 USPQ2d 1115]**

**"The purpose of the 'written description' requirement is broader than to merely explain how to 'make and use'; the applicant must also convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the *invention*. The invention is, for purposes of the 'written description' inquiry, whatever is now claimed" [Vas-Cath Inc. V. Mahurkar (CA FC) 19 USPQ2d 1117].**

**"Lockwood argues that the district court erred by looking solely at the applications themselves. We do not agree. It is the disclosures of the applications that count. Entitlement to a filing date does not extend to subject matter which is not disclosed, but would be obvious over what**

**is expressly disclosed. It extends only to that which is disclosed"**  
**(emphasis added)**

**[Lockwood v. American Airlines Inc. (CA FC) 41 USPQ2d 1961, 1966]**

**"Lockwood argues that all that is necessary to satisfy the descriptive requirement is to show that one is 'in possession' of the invention. Lockwood accurately states the test .....but fails to state how it is satisfied. One shows that one is 'in possession' of the *invention* by describing the *invention*, with all its claimed limitations, not that which makes it obvious. *Id.* ('[T]he applicant must also convey to those skilled in the art that, as of the filing date sought, he or she was in possession of the *invention*. The invention is, for purposes of the 'written description inquiry' whatever is now claimed.').....One does that [i.e. describes the *invention*] by such descriptive means as words, structures, figures, diagrams, formulas, etc., that fully set forth the invention. Although the exact terms need not be used in haec verba, .....the specification must contain an equivalent description of the claimed subject matter. A description which renders obvious the invention for which an earlier filing date is sought is not sufficient"**

**[Lockwood v. American Airlines Inc. (CA FC) 41 USPQ2d 1961, 1966]**

**"Thus the earlier application must meet the written description requirement of Section 112. The test for sufficiency of the written description is the same, whether for a design or utility patent. This test has been expressed in various ways; for example, 'whether the disclosure of the application 'reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter'.....When the earlier disclosure is less than clear on its face, courts have explained that the prior application must necessarily have described the later claimed subject matter"**

**(emphasis added)**

**[In re Daniels (CA FC) 46 USPQ2d 1790]**

**"It is insufficient as written description, for purposes of establishing priority of invention, to provide a specification that does not unambiguously describe all limitations of the count"**

**[Hyatt v. Boone (CA FC) 47 USPQ2d 1128]**

**"Entitlement to a filing date does not extend to subject matter which is not disclosed, but would be obvious over what is expressly disclosed. It extends only to that which is disclosed. While the meaning of terms, phases, or diagrams in a disclosure is to be explained or interpreted**

**from the vantage point of one skilled in the art, all limitations must appear in the specification. The question is not whether a claimed invention is an obvious variant of that which is disclosed in the specification. Rather, a prior application itself must describe an invention, and do so in sufficient detail that one skilled in the art can clearly conclude that the inventor invented the claimed invention as of the filing date sought"**

**[Lockwood v. American Airlines Inc. (CA FC) 41 USPQ2d 1961, 1966]**

7) The original specification of the instant application is the same as the specification of applicants' 1987 parent CIP application. Thus, to establish a 1987 priority date for that which is currently claimed under section 120, applicants need only establish the fact that there was adequate section 112-1 support in the instant 1987 CIP disclosure for *the invention* that is now claimed. However, the same is not true of the alleged 1981 priority date. Specifically, the 1987 CIP specification is not the same as the 1981 specification nor has the 1981 specification been incorporated into the 1987 CIP in any immediately discernible fashion. The mere fact that the 1987 CIP application specifically identifies itself as being a CIP application of one having the 1981 specification, is not sufficient to incorporate any part of the 1981 specification thereto. The 1981 specification itself has therefor been left behind in the drafting and filing of the 1987 CIP. What this means in term of priority under section 120, is that the currently pending claims are only entitled to the 1981 priority date if it can be determined that they recite an invention that was not only described in the instant 1987 specification, but that was also described 1981 parent specification.

**"Applicant is confusing two distinctly different things:**

**(1) the right to have benefit of the filing date of an earlier application under § 120 for subject matter claimed in the later application because that subject matter is disclosed in an earlier application to which a 'specific reference' is made - i.e., a reference to the earlier application per se, and**

**(2) the incorporation by reference in an application of matter elsewhere written down (not necessarily in a patent application), for economy, amplification, or clarity of exposition, by means of an incorporating statement clearly identifying the subject matter which is incorporated and where it is to be found"**

**[In re DE SEVERERSKY, 177 USPQ 146 (CCPA 1973)]**

**"Statement in application that it is 'continuation-in-part' of prior application is insufficient to incorporate therein any part of prior**

**application; all that it means is that insofar as disclosure of application finds corresponding disclosure in prior application, the application is entitled to filing date of prior application"**

**[In re DE SEVERERSKY, 177 USPQ 144 (CCPA 1973)]**

**"All it means insofar as the disclosure of the parent finds corresponding disclosure in the grand parent, the parent is entitled to the filing date of the grand parent. 35 U.S.C. 120"**

**[In re DE SEVERERSKY, 177 USPQ 146 (CCPA 1973)]**

**"Section 120 merely provides mechanism whereby application becomes entitled to benefit of filing date of earlier application disclosing same subject matter; common subject matter must be disclosed in both applications, either specifically or by express incorporation by reference of prior disclosed subject matter; nothing in Section 120 itself operates to carry forward earlier application; it contains no magical disclosure - augmenting powers able to pierce new matter barriers; therefor, it cannot "limit" absolute and express prohibitions against new matter contained in Section 251."**

**[Dart Industries, Inc. v. Banner, Commissioner of Patents and Trademarks, (CA DC), 207 USPQ 273]**

More specifically, because the 1981 specification was discarded in the drafting of the 1987 CIP, applicants' currently pending amended claims would only be entitled to the 1981 priority date if applicant's can show/prove that they are directed to an invention that was described in both the 1987 and 1981 specifications; i.e. the claimed invention must be shown to comprise "common subject matter". Being such, if a currently pending claim is necessarily directed to so much as a **smudge** of "new matter"<sup>10</sup>, i.e. subject matter introduced via the filing of the 1987 CIP specification, said claim is not entitled to the 1981 priority date:

**"Unlike the enablement provision of section 112, where the disclosure of a single species might be sufficient to enable a practitioner skilled in the art to make and use any member of the genus,....., the written description requirement of section 112 requires more. See Vas - Cath, supra. This strict reading of the written description requirement prevents an inventor from surreptitiously expanding a patent through successive continuation-in-parts. See *Id.* At 1562. Essentially, it limits**

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<sup>10</sup> Wherein "new matter" is, by definition, "matter involving a departure from or in addition to the original disclosure" [37 C.F.R. 1.118]

**the claims of an applicant to those inventions he clearly discloses, either expressly or inherently" (emphasis added)**

[Tronzo v. Biomet Inc. (DC SFla) 41 USPQ2d 1403 <sup>11</sup> citing Vas-Cath Inc. v. Mahurkar (CA FC) 19 USPQ2d 1111]

**"To be entitled to the filing date of a previously filed application, appellant's application on appeal would have to satisfy the requirements of 35 U.S.C. 120, among which is the requirement that the subject matter now claimed be disclosed in a manner prescribed by the first paragraph of section 112 in the prior application. Since, to conform to section 112, claimed subject matter must be described in the specification relied upon, subject matter which is first introduced in a continuation-in-part application is not entitled to the filing date of the parent application"**

[In re van Langenhoven, 173 USPQ 426 (CCPA 1972)]

**"A continuation-in-part application is not entitled to the benefit of the earlier filing date of its parent application where the changes included within subsequent applications are 'new matter' which either alters the substance of the invention or makes the composition an invention for the first time, as opposed to the situation in which the subsequent application merely contains either a language change not effecting the meaning of the prior application or a specification which narrows the scope of that which was previously claimed. [Indiana General Corp. v. Krystinel Corp., 161 USPQ 82, 94-95]**

**"However, as mentioned earlier, a continuing application is entitled to rely on the earlier filing date of an earlier application only with respect to subject matter common to both applications" (emphasis added)**

[In Transco Products, Inc., v. Performance Contracting, Inc., 32 USPQ2d 1077 [\*18]]

**"Any claim in a continuation-in-part application that is directed solely to subject matter adequately disclosed under 35 U.S.C. 112 in the parent application is entitled to the filing date of the parent application."**

[In Transco Products, Inc., v. Performance Contracting, Inc., 32 USPQ2d 1077 [\*18]]

**"Assuming the common inventorship, copendency, and cross-reference required by section 120, that section further requires only that the invention be disclosed in the parent application in such manner as to**

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<sup>11</sup> NOTE: this case was appealed [Tronzo v. Biomet (CA FC) 47 USPQ2d 1829]

**comply with the first paragraph of section 112 and be the same invention as that disclosed in the later application."** (emphasis added)  
[Kirschner, 305 F.2d 897 (C.C.P.A.1962)]

**"Lockwood argues that all that is necessary to satisfy the descriptive requirement is to show that one is 'in possession' of the invention. Lockwood accurately states the test .....but fails to state how it is satisfied. One shows that one is 'in possession' of the *invention* by describing the *invention*, with all its claimed limitations, not that which makes it obvious. *Id.* ('[T]he applicant must also convey to those skilled in the art that, as of the filing date sought, he or she was in possession of the *invention*. The invention is, for purposes of the 'written description inquiry' whatever is now claimed.').....One does that [i.e. describes the *invention*] by such descriptive means as words, structures, figures, diagrams, formulas, etc., that fully set forth the invention. Although the exact terms need not be used in *haec verba*, .....the specification must contain an equivalent description of the claimed subject matter. A description which renders obvious the invention for which an earlier filing date is sought is not sufficient"**  
[Lockwood v. American Airlines Inc. (CA FC) 41 USPQ2d 1961, 1966]

**"Lockwood argues that the district court erred by looking solely at the applications themselves. We do not agree. It is the disclosures of the applications that count. Entitlement to a filing date does not extend to subject matter which is not disclosed, but would be obvious over what is expressly disclosed. It extends only to that which is disclosed"**  
(emphasis added)

[Lockwood v. American Airlines Inc. (CA FC) 41 USPQ2d 1961, 1966]

- 8) Applicants' position pertaining to the requirements of Section 120 priority does not appear to make sense. Specifically, applicants' position, if accepted, means that a significant advantage is bestowed on inventors who are willing to file CIP applications. Namely, in such a world, an inventor can describe and claim invention B in a later filed CIP application, and yet obtain the earlier filing date of a different invention A that was described in an earlier filed parent application for invention B, simply by drafting quasi-generic claims in the CIP application having limitations that are "anticipated" by the descriptions of invention A in the parent application. Clearly, the purpose of Section 120 was to allow an applicant to file a later "continuing" application while *preserving* the earlier filing date of the parent application for that subject matter, and only that subject matter, that was disclosed in the earlier filed parent. The purpose of Section 120 was not to provide filers of CIP applications advantages over non-filers of CIP applications;

i.e. such as the right to an earlier filing date for a later filed invention via creative claim construction. To the contrary, as has been addressed above, Section 112-1 was specifically incorporated into Section 120 for the purpose of ensuring that filers of CIP applications were not bestowed with such "advantages".

**"In 1967, the Court of Custom and Patent Appeals first separated a new written description (WD) requirement from the enablement requirement of [Section] 112. The reason for this new judge-made doctrine needs some explanation. Every patent system must have some provision to prevent applicants from using the amendment process to update their disclosures (claims or specification) during their pendency before the patent office. Otherwise applicants could add new matter to their disclosures and date them back to their original filing date, thus defeating accurate accounting of the priority of invention."**

[Enzo Biochem Inc. v. Gen-Probe Inc. 63 USPQ2d 1618,1624 (CA FC 2002)]

9) The courts have made it clear that, under section 120, the subject matter described and claimed in a CIP application does not have to be described the same way in a parent application to be entitled to the filing date of the parent application; e.g.

**"A continuation-in-part application, by definition, contains a substantial portion or all of the earlier application plus additional, previously undisclosed subject matter. A mere embellishment, or technical improvement, of features disclosed in the original application, which does not contribute to its novelty, utility, or non-obviousness, does not deprive a continuation application of its validity, or a patentee of the original filing date of the parent application"**

[Acme Highway Products Corporation v. The D.S. Brown Company et al., (CA 6) 167 USPQ 129 at 134]

**"New matter is not introduced by amendments, continuation applications or CIPs which merely clarify or make definite that which was expressly or inherently disclosed in the parent application or which conform the specification to matter originally disclosed in the drawings or claims"**

[Stearn v. Superior Distributing Company et al., (CA 6), 215 USPA 1089 at 1094]

However, the courts have also made it clear that simply because an application purports to be a "continuation" or "CIP" application does not mean that it is a true continuation or true CIP application. Namely, to be a "*true continuation*"

application, the application must in fact disclose and claim subject matter previously disclosed in the parent application; e.g.

**"Thus, if an application is, in fact, a true continuation application, it is entitled to the filing date of the original parent application. If, however, it discloses and claims subject matter not common to or not supported by the parent application, it is not a true continuation application and any claims therein that include new matter are only entitled to the actual filing date of the later-filed application, and not the earlier parent application"**

[Reynolds Metals Company v. The Continental Group, Inc., (DC NIII), 210 USPQ 911 at 929]

The more one compares applicants' 1987 subject matter, i.e. that is disclosed and claimed with respect to the instant 1987 CIP specification, with applicants' 1981 subject matter that was described in the now discarded 1981 parent specification, the more one becomes aware of the differences and inconsistencies that exist between these two disclosures [e.g. note appendix II of this Office action]. These differences and inconsistencies occur at all levels of the CIP disclosure and go far beyond those which merely clarify or make definite the 1981 subject matter previously described in the now discarded 1981 parent specification. In fact, the 1987 systems/methods described in the 557 pages of the 1987 CIP specification appear to be so completely "expanded", "enhanced", and "improved" relative to those of the discarded 1981 parent specification that it not only seems reasonable to question whether or not the instant 1987 is a "true continuation" of the 1981 parent, but it seem necessary to question it. Proving their allegations of priority under section 120 to an earlier 1981 filing date is, after all, applicants' burden.

**"A party who, like Hiraga, relies on an earlier-filed application under 35 U.S.C. 119 or 120 has the burden to show that the foreign or patent application supports later-added claims under 35 U.S.C. 112-1"**

[Utter v. Hiraga 6 USPQ 2d 1709, 1713 (Fed. Cir. 1988)]

This burden is not met by citing diverse 1981 and 1987 disclosures from the respective 1981 and 1987 CIP specifications that arguably "anticipate" all of a given claim's limitations in respectively different 1981 and 1987 ways (as applicant has alleged throughout the record). To the contrary, a proper Section 120 inquiry demands that the respective 1987 and 1981 teaching be relied upon to establish section 120 priority be compared to determine if they truly represent "common subject matter" required for priority under section 120.

**"The Inquiry required by section 120 demands a comparison not only of the claims of the parent and continuation-in-part application, but also of any other disclosures made in the applications" [Acme Highway Products Corporation v. The D.S. Brown Company et al., (CA 6), 167 USPQ 129 at 133]**

**B. It is believed that Applicants' have improperly dismissed, as irrelevant, the significant differences and inconsistencies that clearly exist between the written description that is provided in the 557 pages of the instant 1987 CIP specification and the written description provided in the 44 pages of the past 1981 parent specification (i.e. as they pertain to the issue of priority under section 120):**

- 1) Applicant alleges that the issue of Section 120 priority pertains only to that which is claimed. Namely, applicants contend that:
  - a) The examiner should first give each of applicants' currently pending amended claims its "broadest reasonable interpretation";
  - b) Next, the examiner should determine if this "broadest reasonable interpretation" allows the claim to be "supported" (e.g. in sense of "anticipation" under Section 102) by subject matter found somewhere in the 557 pages of the instant 1987 CIP specification;
  - c) Then, that the examiner should determine if this "broadest reasonable interpretation" also allows this same claim to be "supported" (e.g. in sense of "anticipation" under Section 102) by subject matter found in the past 1981 parent specification; and
  - d) If the answer to steps "b" and "c" is yes, then applicants contend that the claims are entitled to the 1981 filing date of the parent application irrespective of the many noted difference that exist between the 1987 and 1981 written description that have been relied upon; i.e. differences/conflicts that the current examiner has cited throughout the present prosecution.

**"[Section] 120 does not require an applicant to demonstrate that the disclosures relied upon under §120 have anything in common besides their ability to separately comply with §112-1 with respect to the claims for which priority is sought. Accordingly, the Examiner's focus on comparing the support from the two applications for similarity or common subject matter is improper and irrelevant because all applicants are required to do is satisfy §120 is show that each disclosure meets the requirements of §112-1 for a given claim."** (emphasis added)

[Page 141 of applicant's response filed on 1/28/2002 in application S.N. 08/470,571]

**"Accordingly, the law requires a two part test in which the applicant separately demonstrates § 112 support for each application. In the FOA, the examiner distorts this straightforward test by imposing a third element of the test**

**whereby the § 112 support from each application consists of  
'common subject matter.'**

[see the last 10 lines on page 137 of the response filed on 1/28/2002 in SN 08/470,571].

However, as noted above, Applicants appear to have confused the requirement of "anticipation" under section 102 with requirements of "adequate written description" under section 112-1 as incorporated within Section 120.

2) As has been set forth in "Section I" of the Office action mailed 7/17/2002 in SN 08/470,571, the 1987 subject matter that is described in the 557 pages of the instant CIP specification is vastly different from and inconsistent with the 1981 subject matter that was previously described in the 44 pages of applicants' past 1981 parent specification. By applicants' own admissions, the inventions described in the 44 pages of his 1981 specification have been expanded by the description that is contained in the 557 pages of the instant 1987 specification so as to contain, at best, "many improvements and enhancements":

**"Certainly, I made an effort early on to determine whether or not the disclosures of the '490 patent made their way into the '277 and although they're spread around and sometimes stated a little bit differently, for all relevant purposes of this hearing, the '490 patent is expanded by the '277. Its certainly not inconsistent."** (emphasis added)

[Applicant counsel argument before the ITC (1997 ITC LEXIS 307, \*252)]

**"In fact, both [the 1981 and 1987] specifications describe the inventions disclosed in the 1981 specification, although the 1987 specification contains many enhancements and improvements."**

[see the last two lines on page 9 of applicant's supplemental response filed 5/6/02 in SN 08/470,571]

Because only expanded descriptions containing "enhanced and improved" 1987 versions of the 1981 inventions exist within the instant 1987 CIP specification, when citing alleged section 112-1 support for the pending claims of the instant 1987 CIP disclosure, applicants' citations inevitably rely on "enhanced and improved" 1987 subject matter<sup>12</sup>. Applicants contend that the fact that the current claims must derive "adequate written description" under Section 112-1 from such expanded 1987 descriptions is irrelevant to the Section 120 priority issue.

**"The fact that the [section 112-1] support [that applicant] identified in the 1987 specification for a certain [claimed] features (or limitation)**

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<sup>12</sup> The examiner notes that this fact is blatantly obvious whenever applicant attempts to specifically show alleged dual section 112-1 support for each claim limitation of any given pending amended claim [e.g. as is exemplified via Appendix A of the amendment filed 6/7/2000 in 08/470,571]

**also happens to include additional features or details relating to the same underlying feature (or limitation) disclosed in the 1981 specification , does not mean that both specifications do not support the feature or limitation with similar and valid 'common subject matter' support.”<sup>13</sup>**

[lines 5-8 on page 10 of the supplemental response]

To the contrary, it seems that preventing an applicant from relying on such expanded written descriptions in a later CIP application, one in which claims priority to an earlier filed parent application not having such expanded descriptions is sought, is precisely why the written description requirement of Section 112-1 was incorporated within Section 120 in the first place.

**“Unlike the enablement provision of section 112, where the disclosure of a single species might be sufficient to enable a practitioner skilled in the art to make and use any member of the genus,....., the written description requirement of section 112 requires more. See Vas - Cath, supra. This strict reading of the written description requirement prevents an inventor from surreptitiously expanding a patent through successive continuation-in-parts. See *id.* At 1562. Essentially, it limits the claims of an applicant to those inventions he clearly discloses, either expressly or inherently”** (emphasis added)

[Tronzo v. Biomet Inc. (DC SFla) 41 USPQ2d 1403<sup>14</sup> citing Vas-Cath Inc. v. Mahurkar (CA FC) 19 USPQ2d 1111]

**“A continuation-in-part application is not entitled to the benefit of the earlier filing date of its parent application where the changes included within subsequent applications are ‘new matter’ which either alters the substance of the invention or makes the composition an invention for the first time, as opposed to the situation in which the subsequent application merely contains either a language change not effecting the meaning of the prior application or a specification which narrows the scope of that which was previously claimed. [Indiana General Corp. v. Krystinel Corp., 161 USPQ 82, 94-95]**

**“In 1967, the Court of Custom and Patent Appeals first separated a new written description (WD) requirement from the enablement requirement of [Section] 112. The reason for this new judge-made doctrine needs some explanation. Every patent system must have some provision to prevent applicants from using the amendment process to update their**

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<sup>13</sup> Throughout the prosecution history, applicant has maintained that “common subject matter” is not a real/actual requirement of section 120 but is instead a requirement that the examiner himself has created and imposed on the current applicant. It is not clear whether this quote reflects a departure from applicant’s past positions (?)

<sup>14</sup> NOTE: this case was appealed [Tronzo v. Biomet (CA FC) 47 USPQ2d 1829]

**disclosures (claims or specification) during their pendency before the patent office. Otherwise applicants could add new mater to their disclosures and date them back to their original filing date, thus defeating accurate accounting of the priority of invention."**  
[Enzo Biochem Inc. v. Gen-Probe Inc. 63 USPQ2d 1618,1624 (CA FC 2002)]

After all, the written description requirement of Section 112-1 requires an applicant to provide a written description of the *invention* within his specification, i.e. to describe that which is claimed, in order put the public on notice as to exactly what it is that applicant has invented.

**An adequate written description of the invention "guards against the inventor's overreaching by insisting that he recount his invention in such detail that his future claims can be determined to be encompassed within his original creation."**

**[Vas-Cath Inc. V. Mahurkar (CA FC) 19 USPQ2d 1115]**

Thus, when considering the adequate written description requirement of Section 112-1 that has been incorporated into Section 120, one actually considers/compares the respective disclosures themselves to determine whether the *invention* as described in the instant CIP specification was also described in the parent specification.

**"The inquiry required by section 120 demands a comparison of 1) the claims of the parent and CIP applications and 2) any other disclosures made in the applications such as specification and drawing. Acme Highway, supra, at 1079, 167,USPQ at 132-33."**

**[Stern v. Superior Distributing Company et al., (CA 6), 215 USPQ 1089 at 1094]**

**"Lockwood argues that the district court erred by looking solely at the applications themselves. We do not agree. It is the disclosures of the applications that count. Entitlement to a filing date does not extend to subject matter which is not disclosed, but would be obvious over what is expressly disclosed. It extends only to that which is disclosed"** (emphasis added)

**[Lockwood v. American Airlines Inc. (CA FC) 41 USPQ2d 1961, 1966]**

Only if the respective written descriptions from the respective disclosures, i.e. those which are relied upon to describe "the invention", are the same or equivalent is the section 112-1 requirement of section 120 met; e.g. the respective written descriptions must define "common subject matter".

**"However, as mentioned earlier, a continuing application is entitled to rely on the earlier filing date of an earlier application only with respect to subject matter common to both applications"** (emphasis added)  
[In *Transco Products, Inc., v. Performance Contracting, Inc.*, 32 USPQ2d 1077 (\*\*18)]

Being such, the differences and inconsistencies that exist between the 1987 and 1981 written descriptions being relied upon by applicant to allegedly support the claims cannot be simply dismissed as being irrelevant to the Section 120 priority issue as applicants wish, hope, and most likely need. That is because these differences define different subject matter and therefor describe different inventions (i.e. by applicants' own admission, that which is described by the 1987 written description has clearly being "expanded" when compared to that which was described in the 1981 written description).

Clearly, to obtain priority under section 120, the written description of the instant 1987 CIP specification must describe the invention that is being claimed, and the written description of the 1981 parent specification must describe *this same invention*. And, contrary to applicants assertions, the only way that this can be determined is by comparing the respective 1987 and 1981 descriptions/disclosures themselves (e.g. for the presence of common subject matter).

**"The Inquiry required by section 120 demands a comparison of 1) the claims of the parent and CIP applications and 2) any other disclosures made in the applications such as specification and drawing. Acme Highway, supra, at 1079, 167,USPQ at 132-33."**  
[*Stern v. Superior Distributing Company et al., (CA 6), 215 USPQ 1089 at 1094*]

3) As noted above, due to the complexity of the Section 120 priority issue that has been created by the way in which applicants have elected to draft their 1987 CIP specification and pending claims, the burden of establishing priority under Section 120 is a daunting task. It is fortunate for the examiner/Office that the burden of showing and establishing section 120 priority falls on applicants:

**"A party who, like Hiraga, relies on an earlier-filed application under 35 U.S.C. 119 or 120 has the burden to show that the foreign or patent application supports later-added claims under 35 U.S.C. 112-1"**  
[*Utter v. Hiraga* 6 USPQ 2d 1709, 1713 (Fed. Cir. 1988)]

In light of all the ambiguities that have been shown to exist between applicants' 1987 and 1981 written descriptions, applicants' allegations of priority to the 1981 filing date for that which is claimed, when made, will not be accepted until such time that applicant shows that the claim(s) in question fulfill the actual requirement of Section 120; the examiner has not (and will not) accept the "anticipation" standard of alleged claim support which applicants have (and continue) to rely upon improperly [SEE section II of this Office action].

4) Before the ITC, applicants' own counsel seems to have alleged that he was "unaware of any significant differences" between the specification of applicant 1987 CIP application and the specification of applicant' 1981 parent application.

**"To the extent -- and I'm unaware of any significant differences between the '490 patent [the 44 pages of applicants' past 1981 Parent specification] and the '277 patent [the 557 pages of applicants' instant 1987 CIP specification]. I haven't seen one, and I don't remember it. Certainly, I made an effort early on to determine whether or not the disclosures of the '490 patent made their way into the '277 and although they're spread around and sometimes stated a little bit differently, for all relevant purposes of this hearing, the '490 patent is expanded by the '277. Its certainly not inconsistent."**

[Applicant counsel argument before the ITC (1997 ITC LEXIS 307, \*252)]

Administrative Law Judge Luckern responded to this allegation by pointing out that there was at least one very "significant difference" between applicant's 1987 and 1981 specifications – namely, the fact that the 557 page of applicants instant 1987 CIP specification was more than 500 pages longer than the 44 pages of applicants' 1981 parent specification.

**"There is at least one significant difference in the specifications of the '490 [the 44 pages of the past 1981 Parent specification] and '277 [the 557 pages of the present 1987 CIP specification] patents, viz. the fact that the '277 specification is more than ten times the length of the '490 specification. More over, assuming no inconsistencies between the two specifications, it is indisputable that the '277 specification contains a significant amount of material that was added to the disclosure of the '490 specification in 1987 (i.e. over 500 pages of text)."**

[Administrative Law Judge Luckern's response to the applicant counsel testimony (1997 ITC LEXIS 307, \*252)]

However, the number of pages added by the 1987 CIP goes far beyond the 500 pages cited by Judge Luckern in light that the 500 page calculation assumes that the 44 page text from the 1981 specification had in fact been carried forward into the specification of the 1987 CIP. Such an assumption is clearly erroneous as is evident by applicants' counsels' allegation:

**"Certainly, I made an effort early on to determine whether or not the disclosures of the '490 patent made their way into the '277 and although they're spread around and sometimes stated a little bit differently, for all relevant purposes of this hearing, the '490 patent is expanded by the '277. Its certainly not inconsistent."**

[Applicant counsel argument before the ITC (1997 ITC LEXIS 307, \*252)]

Within this statement, it is unclear as to exactly what applicants' counsel meant by "inconsistent". Namely, it seems to be an undisputable fact that the 1987 systems and methods which are described in the 1987 CIP are "inconsistent" with respect to the systems and methods that were previously described in the 1981 specification to the extent that the 1987 systems/methods clearly represent "expanded", "enhanced", and "improved" versions of the system/method that were described in the 1981 parent.

**"Certainly, I made an effort early on to determine whether or not the disclosures of the '490 patent made their way into the '277 and although they're spread around and sometimes stated a little bit differently, for all relevant purposes of this hearing, the '490 patent is expanded by the '277. Its certainly not inconsistent."** (emphasis added)

[Applicant counsel argument before the ITC (1997 ITC LEXIS 307, \*252)]

**"In fact, both [the 1981 and 1987] specifications describe the inventions disclosed in the 1981 specification, although the 1987 specification contains many enhancements and improvements."** (emphasis added)  
[see the last two lines on page 9 of applicant's supplemental response filed 5/6/02 in SN 08/470,571]

However, preventing "expansion"/"enhancements"/"improvements" of disclosed/claimed subject matter via the filing of one or more such CIP applications is precisely why the written description requirement of section 112-1 was into section 120 in the first place.

**"Unlike the enablement provision of section 112, where the disclosure of a single species might be sufficient to enable a practitioner skilled in the art to make and use any member of the genus,....., the written description requirement of section 112 requires more. See Vas - Cath, supra. This strict reading of the written description requirement prevents an inventor from surreptitiously expanding a patent through**

**successive continuation-in-parts.** See *id.* At 1562. Essentially, it limits the claims of an applicant to those inventions he clearly discloses, either expressly or inherently" (emphasis added)  
[Tronzo v. Biomet Inc. (DC SFla) 41 USPQ2d 1403<sup>15</sup> citing Vas-Cath Inc. v. Mahurkar (CA FC) 19 USPQ2d 1111]

**"A continuation-in-part application is not entitled to the benefit of the earlier filing date of its parent application where the changes included within subsequent applications are 'new matter' which either alters the substance of the invention or makes the composition an invention for the first time, as opposed to the situation in which the subsequent application merely contains either a language change not effecting the meaning of the prior application or a specification which narrows the scope of that which was previously claimed. [Indiana General Corp. v. Krystinel Corp., 161 USPQ 82, 94-95]**

**"Section 120 merely provides mechanism whereby application becomes entitled to benefit of filing date of earlier application disclosing same subject matter; common subject matter must be disclosed in both applications, either specifically or by express incorporation by reference of prior disclosed subject matter; nothing in Section 120 itself operates to carry forward earlier application; it contains no magical disclosure – augmenting powers able to pierce new matter barriers; therefor, it cannot "limit" absolute and express prohibitions against new matter contained in Section 251."**

[Dart Industries, Inc. v. Banner, Commissioner of Patents and Trademarks, (CA DC), 207 USPQ 273]

**"In 1967, the Court of Custom and Patent Appeals first separated a new written description (WD) requirement from the enablement requirement of [Section] 112. The reason for this new judge-made doctrine needs some explanation. Every patent system must have some provision to prevent applicants from using the amendment process to update their disclosures (claims or specification) during their pendency before the patent office. Otherwise applicants could add new matter to their disclosures and date them back to their original filing date, thus defeating accurate accounting of the priority of invention."**

[Enzo Biochem Inc. v. Gen-Probe Inc. 63 USPQ2d 1618,1624 (CA FC 2002)]

Specifically, despite applicants counsel's allegation, the 557 pages of new text that is the 1987 CIP disclosure are full of "inconsistencies" with respect to the 44 page written description of the 1981 parent application - at least to the extent that

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<sup>15</sup> NOTE: this case was appealed [Tronzo v. Biomet (CA FC) 47 USPQ2d 1829]

the new disclosure that is the 1987 CIP specification significantly alters the substance of the systems/methods that were described in 1981 parent application (i.e. which is, by definition, "new mater"). That is, the "new" descriptions provided by 1987 CIP are in no way limited to changes in language that do not effect the meaning of that which was described the prior 1981 parent! Namely, when referenced back to the written description of the 1981 parent, the written description of the 1987 CIP effected nothing less than:

- 1) "Expanding" (i.e. changes and broadened) the way in which various terminologies were define and used (e.g. "programming", "words", etc, ...);
- 2) Changes in the way the "illustrated" structures were configured and operated;
- 3) Changed/Upgraded in the signaling transport technology on which all of the described methods/systems of the 1987 CIP disclosure were based (1987 SPAM packets v. 1981 trigger/cuing "words");
- 4) "Expanded" (i.e. changes and broadened) the types of signaling that was conveyed as "instruct" and "control" signals (e.g. provided by the added ability of the 1987 SPAM packets to carry/download computer software);
- 5) "Expanded" (i.e. changed and broadened) the described environments to which the described methods/systems were applied (e.g. the 1987 descriptions no longer being confined to TV/Radio distribution applications);
- 6) Etc,....

Some of the more noteworthy of these differences and "inconsistencies" are addressed in Appendix I and Appendix IV of this Office action.

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**APPENDIX III: (SOME NOTEWORTHY DIFFERENCES)**

NOTEWORTHY DIFFERENCES AND INCONSISTENCIES BETWEEN  
APPLICANT 1981 AND 1987 CIP SPECIFICATIONS:

1) On page 149 of the response filed 1/28/2002 in SN 08/470,571, applicants appear to have acknowledged the fact that the same "programming" terminology was defined differently within the respective 1981 and the 1987 disclosures. Specifically:

a) The disclosure of the 1981 parent application, which was not carried forward into the instant 1987 CIP disclosure, defined the "programming" terminology to mean:

***"Everything that is transmitted over television or radio intended for communication of entertainment or to instruct or inform"; whereas***

b) The instant 1987 CIP disclosure defined this same "programming" term to mean:

***"Everything that is transmitted electronically to entertain, instruct, or inform including television, radio, broadcast print, computer programming, as well as combined medium programming".***

Amazingly, in this response, applicants allege that the meaning that is respectively imparted to the same "Programming" terminology by these different definitions is the same. In fact, applicant alleges that the only difference that exists between the 1981 and 1987 "programming" definitions are ones that the instant examiner created [see page 149 of the response filed 1/28/2002 in SN 08/470,571]. Nonsense!

Clearly, the 1981 definition defines the "programming" terminology as being Radio and TV transmissions, while the 1987 disclosure expands the definition be "everything that is transmitted electronically."<sup>16</sup> And, contrary to applicants' accusation, the instant examiner was not present and played no part in creating or incorporating these vastly different 1981 and 1987 "programming" definitions into applicants' respective 1981 and 1987 disclosures.

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<sup>16</sup> In fact, the 1987 definition not only expands the "programming" terminology to mean "everything transmitted electronically", but this 1987 expanded "programming" definition explicitly adds "computer programming", "broadcast print", and "combined medium programming" to the "television and radio transmissions" which made up the 1981 "programming" definition.

While applicants can avoid using the "programming" terminology itself in the currently pending amended claims, the "expanded" 1987 definition of the "programming" terminology nonetheless continues to impart its *expanded* meaning onto all of the 1987 disclosures in the CIP specification that are based on this expanded 1987 "programming" definition. And thus, in a like manner, these expanded 1987 descriptions continue to associate expanded 1987 scope/meaning with the limitations of the currently pending amended claims which necessarily derive required section 112 support from such 1987 CIP disclosures. And being that the "programming" terminology does not constitute "common subject matter" between 1981 and 1987 disclosures, as is evident from its vastly different 1987 and 1981 definitions themselves, this too refutes applicants current claim to the 1981 date.

As is evidenced above, the instant 1987 disclosure explicitly defines and uses the "programming" terminology in a way that is vastly different both in scope and meaning from the way that this the same "programming" terminology was previously defined and used within the disclosure of the 1981 parent

**This evidences the fact that one cannot assume that the terminology shared by the respective 1981 and 1987 disclosure is indicative of "common subject matter."**

**2) The embedded "instruct signals" of applicants' 1987 specification comprised computer software/programming whereas the embedded "instruct signals" of applicants 1981 specification did not comprise computer software/programming:**

**This too evidences the fact that one cannot assume that the terminology shared by the respective 1981 and 1987 disclosure is indicative of "common subject matter."**

**3) While the "inconsistent" use/scope/meaning of the "programming" and "instruct signal" terminology between 1987 and 1981 applications is self-evident, the inconsistent use of other shared terminology is less conspicuous. The term "signal word" represents but just one example of the more subtle inconsistencies that exist between the 1981 and the 1987 disclosures.**

The 1981 inventions of the 1981 specification were described as having distributed discrete digital information, in the form of "signal units", from a transmitter site to a plurality of receiver as ancillary data embedded within TV and Radio transmissions. To transmit these "signal units", the bits from one or

more of the "signal units" were organized into one or more discrete strings of bits. Each of these discrete bit strings was then embedded, at a respective discrete time and/or location, within the transmitted TV or radio programming as a "signal word". Specifically, as defined and used within the 1981 specification, each "signal word" represented a respective occurrence/"appearance" of ancillary signaling within the distributed programming:

**"The term 'signal word' hereinafter means one full discrete appearance of a signal as embedded at one of time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. Such strings may or may not have predetermined data bits to identify the beginnings and ends of words. Signal words may contain parts of signal units, whole signal units, or groups of partial and whole signal units or combinations"**<sup>17</sup> [note lines 3-12 of column 3 in US Patent #4,694,490]

Although this 1981 definition of the "signal word" terminology was literally carried forward into the instant 1987, it was carried forward only in a "cosmetic" sense. For while the 1987 disclosure includes an allegation stating that the "signal word" terminology will be defined and used throughout the 1987 disclosure in the same way that it was defined and used in 1981 parent disclosure [see the last 10 lines on page 14 of the instant disclosure], as actually practiced in the 1987 specification, this allegation is untrue. To the contrary, in much to most (if not all) of the remaining portions of the instant 1987 CIP specification, the term "signal word" is not used for the so stated/coined purpose. Instead, the "signal word" terminology was used in a way that is, at best, inconsistent with its explicitly coined definition to its explicitly coined definition. Specifically, in the remaining portions of the 1987 disclosure, the term "signal word" was now used to refer to the N-bit bytes of "computer-type" data which made up the digital information that is now distributed and/or processed by the 1987 inventions [e.g. note: the last three lines on page 54 of the instant disclosure; lines 4-8 on page 56 of the instant disclosure; lines 9-13 on page 59 of the instant disclosure; etc, ...].

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<sup>17</sup> "The term 'signal units' hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a unique purchase order number identifying the prior use of a programming unit, or a general instruction identifying whether a programming unit is to be retransmitted immediately or recorded for delayed transmission." [note: lines 64-68 of column 2 and lines 1-3 of column 3 in US Patent #4,694,490; and lines 25-32 of the instant disclosure]

Namely, in the 1981 specification applicants executed their right to be their own lexicographer and gave the "signal word" terminology a meaning that was unique to applicants' 1981 disclosure. Initially, applicants' 1987 CIP specification indicates that this unique 1981 definition of "signal word" has been carried forward into the 1987 CIP specification. To the contrary, however, the use and meaning of the "signal word" terminology in the 1987 CIP specification was actually "enhanced"/"improved" so to refer instead, in a more conventional sense, to n-bit bytes/"words" of computer data. Thus, somewhat surreptitiously, the meaning/use of the "signal word" terminology has been changed via the filing of applicants' 1987 CIP specification; i.e. the term "signal word" does not constitute common subject matter.

In summary, "signal word" was explicitly defined, coined, and used throughout the discarded 1981 disclosure for the expressed purpose of referring to each occurrence/appearance of ancillary signaling within the distributed TV and radio programming. The instant 1987 CIP disclosure initially incorporates the 1981 "signal word" definition and also indicates/alleges that this 1981 "signal word" definition will be adopted throughout the 1987 CIP. However, this allegation is untrue and misleading because, in practice, the use/meaning of the "signal word" terminology is changed within the instant 1987 disclosure so as to refer to the "words"/bytes of digital computer-type data which comprised (and did not carry) said ancillary signaling; i.e. quite different from its use in the 1981 parent use/definition of this same terminology.

Thus, as with the "programming" terminology, the instant 1987 CIP disclosure's smeared use of explicitly coined "signal word" terminology does not represent "common subject matter" with respect to the disclosure of the 1981 parent and therefor this smeared use/misuse of this terminology is not entitled to the 1981 filing date for reasons addressed above. The smeared use of the "signal word" terminology:

**This evidences the fact that even terminology that has been explicitly coined in both application for the same alleged purpose, is not always what it appears.**

[ALSO, SEE "APPENDIX C" ATTACHED TO THE OFFICE MAILED  
7/17/2002 IN 08/470,571]

**D)** As if the existing uncertainties as where section 112 support can be allegedly found were was not enough, it now seems that applicant has come to a realization that some/much/most of the features now being claimed with respect to the instant 1987 CIP disclosure were not "explicitly" disclosed in the past 1981 Parent specification. Because of this, applicant alleges that those features that are not explicitly present in the 1981 parent specification are, allegedly,

"inherently" present and/or "implicitly" present within the teachings of the past 1981 parent specification.

**"To the contrary, the 1981 definition [of 'programming'] implicitly includes, and the 1987 definition [of 'programming'] explicitly includes, computer programming in the definition".**  
**[lines 20-26 on page 17 of the supplemental response filed 5/6/2002 in application SN 08/470,571]**

**"An applicant is entitled to priority for a claim that was inherently described in an earlier application and explicitly described in a later application"**  
**[note the last 15 lines on page 140 of the response filed on 1/28/2002 in application SN 08/470,571].**

With respect to applicants' allegations of "inherency":

a) It is noted that applicants cannot simply allege that subject matter is inherent in their 1981 parent specification, they must prove that it is inherent within the 1981 specification:

**"If applicant's wish to rely on what inherently happens in examples taken from parent applications, as support for claimed subject matter which is clearly not specifically disclosed, they must prove their case; what they wrote into instant continuation in part application by way of interpretation and contention can avail them nothing."**

[In re Ziegler, Breil, Holzkamp & Martin (CCPA) 156 USPQ 511]

This burden of "proof", however, simply adds to the existing burden of proof that has been caused by applicant's failure to incorporate the 1981 parent specification into the 1987 CIP. Namely, to establish section 120 priority, not only must applicants prove the inherency of the alleged inherent subject matter within the 1981 parent specification, but applicants must also prove/show that this inherent subject matter represents "common subject matter" with respect to that which is now being claimed via applicants' instant 1987 CIP specification given applicants' failure to incorporate the 1981 specification into that of the 1987 CIP; and

b) The implication of claimed subject matter being "inherently" embedded within teachings of the 1981 disclosure, e.g. and previously patented claims derived therefrom, is profound (e.g. especially as it pertains to the

issue of double patenting). Thus, it is respectfully requested that applicant now identify:

1. All of those features from the 1987 disclosure that are "inherently" contained within teachings of the 1981 parent disclosure; and
2. All of those teachings from the 1981 disclosure which "inherently" contain features that are now explicitly disclosed in the instant 1987 CIP specification

*[especially when the issue of "inherent" features pertains to subject matter that is currently being claimed within the instant pending amended claims or to subject matter which has been claimed within previously patented claims].*

**5)** In order to transmit a wider range of control and messaging information than was previously possible, and in order to transmit this wider range of control and messaging information more efficiently within "signal word"-like intervals of Radio/TV/"ALL OTHER" forms of electronic transmissions, applicants' instant 1987 CIP disclosure introduced a packetized data structure called "SPAM" (see figures 2E-2K of the instant disclosure). In applicants' 1987 "SPAM" environment, it was this "SPAM" packeting which carried an expanded range of "signal unit"-like information, and it was the "SPAM" packets themselves whose bits were organized into sequences so as to be transmitted within "signal word"-like intervals of TV/Radio/"ALL OTHER" forms of electronic transmission; e.g. the expression "-like" being appended here and above in order to emphasize the fact that the information carried within "SPAM" packeting, and the "strings" of bits derived from such "SPAM" packeting, are different from the 1981 "signal units" and 1981 "signal words" that were explicitly defined by the 1981 even though such terminology was carried forward, i.e. "cosmetically", into the 1987 disclosure [see part "2)" of part "S)" of this section]. The fact that this 1987 "SPAM" transport scheme was not disclosed within applicants' 1981 parent application appears to have been argued by applicants themselves during ITC Investigation No. 337-TA-392:

**"Even more difficult to understand is PMC's assertion that the French chef example [in the '490 patent], and I am quoting from their brief, 'it says nothing about the recipe being sent in any type of SPAM signal' ..... Technically, they're correct, because the term 'SPAM signal' was introduced in the '277 patent or the specification which led to the '277 patent [i.e. the instant 1987 CIP disclosure], and it doesn't appear in the '490 patent [i.e. the 1981 disclosure of the past parent]"**  
**[1997 ITC Lexis 307,\*254 (Part II)]**

As it applies to the issue of section 120 priority, the examiner maintains that the applicant [PMC] was more than just "technically correct". Specifically, while both of applicants' 1981 and 1987 inventions operated to transmit digitally encoded ancillary signaling within TV/RADIO programming, only the 1987 inventions did so using the more sophisticated 1987 packetized "SPAM" transport technology that was first introduced via the instant disclosure as originally filed within the 1987 CIP. And because applicant submits that all of the recited auxiliary "signaling" of the currently pending claims derive their required Section 112-1 support from the more advanced 1987 "SPAM" technology of the instant 1987 CIP specification, applicant refutes his own claim to the 1981 date of the parent application for these claims being that the 1987 "SPAM" technology now being claimed was not disclosed or supported by the past 1981 parent specification. [NOTE: "APPENDIX A" of applicants' response filed 6/7/2000 in SN 08/470,571; and "APPENDIX C" of the Office action mailed 7/17/2002 in SN 08/470,571].

Because all of the currently pending amended claims appear to have at least one limitation whose meaning is defined by 1987 "SPAM" signaling (a fact that has been evident in all of the claim charts that applicant has submitted to date for the purpose of demonstrating 112-1 support), and because the "SPAM" signaling exists only in the instant 1987 disclosure, all of the currently pending amended claims seem (at best) only to be entitled to the 1987 filing date of the originally filed CIP application; e.g. none of the claims appear to be entitled to the 1981 priority date of the parent disclosure which did not describe "SPAM".

- 6) Applicant alleges that many/most/all of his pending claims derive required section 112 support from the "WALL STREET WEEK" embodiment that was described in the instant disclosure (wherein said instant disclosure was originally filed within a CIP application on 9/11/1987). During the present prosecution, applicant has alleged that these same pending claims are entitled to priority under Section 120 based on a similar "WALL STREET WEEK" embodiment that was described in the disclosure of the parent application filed 11/3/81. Since applicants' 1987 disclosure is different from applicants' 1981 disclosure, and since applicants' 1987 disclosure did not formally incorporate the 1981 disclosure into the 1987 disclosure physically or via an "*incorporation by reference*", the pending claims are only entitled to 1981 priority for "WALL STREET WEEK" subject matter that was common to both disclosures. While the "WALL STREET WEEK" embodiment that is described in applicants' 1987 disclosure and the "WALL STREET WEEK" embodiment that is described in applicants' 1981 disclosure have their similarities, the methods/structures used to carry out these two "WALL STREET WEEK" embodiments are quite different [see appendix I of this Office action]. The following is provided to further exemplify such differences:

a) It is noted that:

1) Applicants' 1987 disclosure references figure 1 of the 1987 disclosure as illustrating the receiver structure that was used to implement the 1987 "WALL STREET WEEK" embodiment [note the discussion which begins in line 21 on page 20 of applicant's 1987 disclosure]; and

2) Applicants' 1981 disclosure references figure 6c of the 1981 disclosure as illustrating the receiver structure that was used to implement the 1981 "WALL STREET WEEK" embodiment [note the discussion which begins on line 31 of column 19 of US Patent #4,694,490].

While these two figures use a common label "MICROCOMPUTER" and reference numeral "205" to identify one element of the respective structures, the respectively identified elements are clearly different in both structure and operation:

**Showing that, as with applicants' use of common terminology, it would also be erroneous for one to assume that common labels and common reference numerals were used in applicants' 1981 and 1987 disclosures as an indication of common elements or "common subject matter".**

The fact that commonly labeled elements in applicants 1981 and 1987 disclosures represent different structures/operations/scopes is evidenced in the following:

1) The "MICROCOMPUTER" (205) of applicants' 1987 disclosure actually comprised the circuitry required for overlaying locally generated graphics over the related/received TV signal broadcast. Whereas, in contrast, the "MICROCOMPUTER" (205) of applicants' 1981 disclosure did not comprise such circuitry but instead outputted locally generated graphics to the TV receiver so that they could be overlaid over a related/received TV signal broadcast;

2) the "MICROCOMPUTER" (205) of applicants' 1987 disclosure actually comprised the circuitry required for receiving, loading, and running downloaded computer software (i.e. the disclosed "program instruction set") which was used to control the

"MICROCOMPUTER"(205) of applicant's 1987 disclosure to execute functions defined by ones of later received discrete instructions. Whereas, in contrast, the "MICROCOMPUTER" (205) of applicants' 1981 disclosure was pre-programmed with computer software which was used to control the "MICROCOMPUTER"(205) of applicant 1981 disclosure to execute functions defined by ones of received discrete instructions;

- b) In view of the differences in structure that is set forth in part a) of this paragraph, it is clear that the method used to overlay graphic images on a related/received TV signal broadcast in the 1987 "WALL STREET WEEK" embodiment is quite different from the method used to overlay graphic images on a related/received TV signal broadcast in the 1981 "WALL STREET WEEK" embodiment. Most notably, in the 1981 "WALL STREET WEEK" embodiment the overlay method was performed by cuing a microcomputer with instructions signals (e.g. with some unspecified type of cuing signals) which caused the microcomputer to execute ones of locally stored software instructions which were required to generate, output, and overlay locally generated graphics onto a received/related video signal broadcast whereas, in sharp contrast, in the 1987 "WALL STREET WEEK" embodiment the overlay method was performed by first **downloading software** to the microcomputer and then cuing the microcomputer with instructions signals (e.g. cuing signals) which caused the microcomputer to execute the downloaded software to generate, output, and overlay locally generated graphics onto a received/related video signal broadcast.
- c) The examiner agrees that applicant is entitled to the 1981 priority date only for those claims of the present application which are limited to subject matter that was **COMMON** to both of applicant's 1981 and 1987 disclosures; i.e. that is limited to the subject matter that was previously disclosed in the 1981 parent. Under the present circumstances<sup>18</sup>, it is maintained that applicant is not entitled to the 1981 priority date for claims in which the **same/common support** can not be shown to exist in both of applicant's 1981 and 1987 disclosures. More specifically, the examiner rejects any allegation that the currently pending amended claims are entitled to the priority of their 1981 disclosure for claims which depend from their 1987 disclosure when it can be shown/alleged that each claim has different interpretations which allow them to be read on applicants' 1987 "WALL STREET WEEK" embodiment (via a first

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<sup>18</sup> The present disclosure: 1) comprises the 1987 disclosure and is, at best, a CIP of the disclosure filed in 1981; and 2) comprises the 1987 disclosure into which the 1981 disclosure has not been incorporated (i.e. neither literally nor by reference).

claim interpretation/construction) and on applicants' 1981 "WALL STREET WEEK" embodiment (via a second claim interpretation/construction that is different from the first); i.e. priority to the 1981 disclosure should/will only be given if applicant can show that the way that the claims are being interpreted is the same for both disclosures ( i.e. if the teachings on which each claim is based is **COMMON** to both disclosures). To permit otherwise, would improperly create a tool by which an applicant could obtain the earlier filing date of a first filed invention, for a later filed invention, by carefully drafting subsequently filed claims in a manner which allows said drafted claims to be read on both inventions via different interpretations of the same claims. In the present application, it would be improper for the examiner to give a 1981 priority date to claims that are directed to applicants' 1987 "WALL STREET WEEK" embodiment even if it can be shown that the same claims can be interpreted in a manner which allows them to be read on applicant's 1981 "WALL STREET WEEK" embodiment; i.e. unless it can show that the support that is provided for the claims by both disclosures is in fact the same/common to both disclosures. Because the disclosed structures and processes used to implement applicants' 1987 "WALL STREET WEEK" embodiment clearly differ from the disclosed structures and processes used to implement applicants' 1981 "WALL STREET WEEK" embodiment (note: parts a and B of this paragraph), the examiner maintains that the subject matter which is actually common to both disclosures, e.g. that subject matter of the 1987 disclosure which is actually entitled to priority of the 1981 disclosure, if any, is very small indeed.

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- 7) As is evident from the claim charts filed in SN 08/470,571 on 6/7/2000, all of the recitations that are directed to the signals/instructions/data that are conveyed as ancillary signaling within Radio and TV Programming transmissions, derive their required Section 112 support from the "SPAM" signaling that was first introduced by applicants' "1987" instant disclosure (as they must given that all of the 1987 invention were described with respect to SPAM signaling). Therefor, the scope and meaning that must be given to these signals/instructions/data recitations under section 112, e.g. their broadest reasonable interpretations, is necessarily defined/interpreted based said on said "SPAM" signaling. However, "SPAM" signaling was not disclosed in the 1981 parent and, therefor, applicant's claim to the earlier 1981 filing date is again refuted; i.e. the scope/meaning imparted to the currently pending amended claims by "SPAM" of the instant "1987" disclosure would not have been imparted to these same limitations by the earlier filed 1981 disclosure which lacked any discussion of "SPAM" therein; e.g. evidencing the fact that a "different invention"/"New Matter"/"different subject matter" has now been disclosed and claimed within the instant application.

**8)** The examiner notes that the basic requirement of section 120 includes "continuity of disclosure". Specifically, for priority to an earlier filing date to be established, section 120 requires that the invention now sought to be patented in a child application to have been "disclosed in the manner provided by the first paragraph of section 112" within the disclosure of the parent application. Significantly, section 120 does not indicate that only the descriptive requirement of section 112-1 must be met, but instead it indicates that all of the requirements of section 112-1 must be met [e.g. this includes the "enablement" requirement and the "best mode" requirement too].

TRANSCO [38 F.3d 551; 32 U.S.P.Q.2D (BNA) 1077] has cited throughout the present prosecution. The TRANSCO decision determined that one is not required to update his "best mode" when filing a continuation. Thus, it is true that the current applicant was not required to update his "best mode" at the time of filing the instant 1987 CIP application. To the contrary, in *dicta*, Judge Rich warned that requiring an applicant to update the best mode when filing the continuation application defeats the purpose of the "continuation":

**"It must be understood that the introduction of a new best mode disclosure would constitute the injection of 'new matter' into the application and automatically deprive the applicant of the benefit of the earlier filing date of the parent or original application for any claim whose validity rests on the new best mode disclosure".**

Being such, to the extent that applicants may have updated their "best mode" via the filing of the 1987 CIP application (if at all); e.g. such as the introduction of the new SPAM signaling scheme, it would appear that applicants have deprived themselves of the 1981 priority date given the dicta of TRANSCO.

**9)** The receiver station circuitry of applicants' 1981 inventions, e.g. that disclosed in the 44 page disclosure of the 1981 parent application, all appear to have been:

- a) "pre-programmed" with the computer programming (i.e. software) that was necessary to detect and recognize the occurrence of certain predetermined digital codes in data that was embedded within received TV and Radio program transmissions; and
- b) "pre-programmed" with the computer programming (i.e. software) that instructed the receiver station circuitry as how to respond when a given one of these certain digital codes was in fact detected/recognized.

Specifically, in the 1981 disclosure, the receiver side circuitry was pre-programmed so as to be effectively "triggered"/"cued" by certain

detected/recognized ones of the embedded digital codes in order to execute a respective portion of the pre-stored software (i.e. a respective "subroutine") thereby causing the receiver station to operate in a predetermined fashion.

In contrast, the receiver station circuitry of applicants' 1987 inventions, e.g. that disclosed in the 557 page disclosure of the 1987 CIP, had the advantage that the pre-programmed software itself could now be changed/modified (i.e. "re-programmed") via a new and very different type of data, i.e. "SPAM" messages, which were now embedded within the received TV and Radio programming. The ability to re-program the receiver stations from a distance (e.g. remotely) meant that the way in which the receiver stations of the system operated/responded to detected/recognized digital codes (now transmitted within "SPAM messages" too) could be change on the fly (i.e. without a visit from a service technician being necessary).

Given the above, it seems apparent that the 1987 inventions do not represent "common subject matter" with respect to the 1981 inventions even though they can both be operated, in very different ways, to produce/provide a similar effect/"application"; e.g. such as respective 1981 and 1987 "WALL STREET WEEK" applications. However, the vast difference in the nature of the 1987 and 1981 inventions appears to be partially masked by the repugnant use (i.e. misuse) of the "computer program" terminology by the 1987 disclosure to encompass things other than computer "software". For example, in lines 13-20 on page 427 of the instant disclosure, the 1987 "invention" was explicitly described as comprising a computer system which operated to produce combined medium combining at respective subscriber stations via the transmission of one "computer program" (e.g. software) to all the computers at all of the subscribed stations. Yet, as an alleged example such computer system operation (e.g. lines 20-34 on page 427), the 1987 disclosure repugnantly cites an operation during which the transmitted SPAM messages were carrying codes which only triggered/cued specific receiver responses within already pre-programmed/re-programmed receiver station circuitry; e.g. as opposed to actually citing an operation during which "software" was being downloaded to re-program the receivers (e.g. as described in lines 5-21 on page 24 of the instant disclosure). By using the "computer program" terminology in this repugnant fashion, it appears that the 1987 disclosure attempts to impart legitimacy to the erroneous claim that the 1981 disclosure described the downloading of "computer software/programming" too; i.e. the argument being that because the trigger/cuing type codes of the 1987 disclosure have been erroneously defined as having comprised "computer programming" (e.g. software), then the corresponding cuing/trigger codes of the 1981 disclosure must be erroneously considered computer programming/software too [an erroneous position which is reflected/echoed in applicant arguments too (e.g. note example #2 under

"Section II" in the Office action mailed on 8/27/01 in SN 08/470,571)]<sup>19</sup>. The result is further confusion!

**10) etc,....**

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<sup>19</sup> See Appendix IV of this Office action.

**XXX**

**APPENDIX IV:** (The embedded auxiliary signaling of the 1981  
parent specification did not transport computer software)

1) Applicant has alleged that his past 1981 Parent specification "implicitly" taught the downloading of "computer programming" (i.e. computer software).

**"To the contrary, the 1981 definition [of 'programming'] implicitly includes, and the 1987 definition [of 'programming'] explicitly includes, computer programming in the definition".**

To try justify/support this erroneous allegation, applicant attempts to weave together a tapestry of "engineered" teachings and definitions:

- A) First, applicant falsely asserts that the past 1981 Parent specification literally used the term "programming" to refer to the described "instruction signals" that were communicated through the TV/RADIO networks of the disclosed "1981 inventions";
- B) Applicant then correctly notes that the "instruction signals" of the past 1981 specification were described as comprising signals which instructed preprogrammed microcomputers to perform given tasks.
- C) Next, applicant cites an outside *Dictionary* definition of the term "program" to show that the term "programming" was conventionally used to refer to "computer programming/software"; and
- D) Finally, applicant erroneously concludes that when one combines the above "engineered" teachings from his past 1981 Parent specification together (A and B above), based on the cited *Dictionary* definition of "program" (C above), one "implicitly" arrives at the cited *Dictionary* definition of "program."

*[i.e. applicants improperly uses an outside dictionary definition of "programming" as the means for erroneously interpreting and combining teachings from the 1981 specification in a way which allows the outside dictionary of "programming" to be retroactively created/inserted within the 1981 specification]*

However, for a variety of reasons, this tapestry falls apart at the slightest touch:

1) When one looks at the way in which the 1981 "programming" terminology was coined and used throughout applicants' past 1981 Parent specification, one finds that the 1981 "programming" terminology referred to signaling which represented scheduled TV/Radio shows (i.e. TV and Radio *programs*). One finds that the 1981 "programming" terminology was never used to refer to "computer software" as applicant now wishes. In fact, despite applicants' false assertion (see "A" of this section), one finds that applicants' 1981 specification did not even use the 1981 "programming" terminology to refer to the 1981 "instruct and information signals". Quite the contrary, applicants' 1981 parent specification actually distinguished the 1981 "instruct and information signals" from the 1981 "programming." Namely, applicants' past 1981 parent specification leaves no doubt that said 1981 "instruct and information signals" constituted ancillary/auxiliary signaling that was "associated" with, and embedded within, said TV/Radio "programming"; i.e. that the information and instruct signals were distinctly different from "programming". This fact is self-evident in the following excerpts taken from applicants' 1981 parent specification:

**"One method provides a technique whereby a broadcast or cablecast transmission facility can duplicate the operation of a television studio automatically through the use of instructions and information signals embedded in programming either supplied from a remote source or sources or prerecorded" (emphasis added)**

[lines 32-37 of column 3]<sup>20</sup>

**"Signal processor, 71, has means, described above, to Identify and separate the instruction and information signals from their associated programing and pass them, along with information identifying the channel source of each signal, externally to code reader, 72." (emphasis added)**

[lines 3-7 of column 11]

**The cable head end facility contains signal strippers, 81, 85, and 89, of which models exist well known in the art, that controller/computer, 73, can instruct to remove signals from the programing as required, and signal generators, 82, 86, and 90,**

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<sup>20</sup> Citations have been obtained from US Patent #4,694,490.

**also known in the art, that controller/computer, 73, can instruct to add signals to programming as required'**  
[lines 36-42 of column 12]

**'One particular advantage of these methods for monitoring programming is that, by locating the identifier signals in the audio and/or video and/or other parts of the programming that are conventionally recorded by, for example, conventional video recorders, ...'**

[lines 25-29 of column 16]

**'Methods for Governing or Influencing the Operation of Equipment that is External to Conventional Television and Radio Sets by Passing Instructions and Information Signal that are Embedded in Television and Radio Programming Transmissions to Such External Equipment' (emphasis added)**  
[Lines 34-38 of column 17]

**'Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programming transmissions' (emphasis added)**  
[lines 39-41 of column 17]

**'Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programming transmission....These [embedded instruction] signals instruct microcomputer, 205, to generate several video graphic overlays...' (emphasis added)**  
[lines 42-49 of column 19]

**'At this point, an instruction signal is generated in the television studio originating the programming and is transmitted in the programming transmission' (emphasis added)**  
[lines 60-63 of column 19]

Given the above, it is ridiculous for applicants to suggest that the term "programming", e.g. in the context of the past 1981 specification, referred to the "instruct and instruction signals" of applicant' past 1981 disclosure. It is even more ridiculous for applicant to suggest that it referred to "computer software".

B) It also seems clear from applicants' 1981 past parent specification that the "microcomputers" on the receiver side of the disclosed 1981 inventions were "*preprogrammed*" with the "computer programming/software" which told them *how to respond* to detected "instruct signals" that were embedded within received TV/Radio

"programming." More specifically, it seems apparent that each of the 1981 "instruct signals" of applicant's 1981 inventions represented cuing-type signals/commands which instructed/triggered "preprogrammed" microcomputers to execute respective portions of its preprogrammed software in order to perform predefined task/operation (e.g. the 1981 "instruct signals" told the 1981 microcomputers "to generate the overlay" whereas the pre-loaded 1981 computer software told said 1981 microcomputers "how to generate the overlay that was to be generated").<sup>21</sup>

**"Microcomputer, 205, Is preprogrammed to respond in a predetermined fashion to instruction signals embedded in the "Wall Street Week" programing transmission....These [embedded instruction] signals instruct microcomputer, 205, to generate several video graphic overlays..." (emphasis added)**  
[lines 42-49 of column 19]

Again, contrary to applicants' erroneous assertions, there is no teaching in applicants' past 1981 specification indicating that applicants' 1981 "instruct signals" represented "computer software/programming" in any conventional sense of such terminology.

C) The past 1981 parent specification does not offer/provide a signaling mechanism and/or structure which would have been capable of handling the large continuous sequence of data bytes required to push "computer software" through TV and/or Radio networks. Such a signaling mechanism and structure was not provided until "SPAM" packeting was introduced via applicants' subsequently filed instant 1987 CIP specification. Thus, applicants' past 1981 parent specification was not enabling of the alleged "computer programming/software" feature (i.e. the alleged "computer programming/software" feature that the past 1981 specification did not even describe/disclose).

Clearly, applicants' 1981 definition and use of the term "programming" did not described or imply the presents of computer software/programming in any conventional sense of the terminology; i.e. it was in fact only used to described and refer to radio and television shows.

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<sup>21</sup> This being even more apparent when one reads the teaching of applicants' past 1981 Parent specification in light of the "enhanced and improved" teachings of applicants' 1987 CIP specification (i.e. a 1987 specification in which cuing-type signaling was enhanced/improved by the added ability of the 1987 systems to re-program downstream devices via downloaded computer software).

2) On page 150 of the amendment filed 1/28/2002 in 08/470,571, applicant states:

**"The 1981 specification states:**

**It is the object of this invention to unlock this potential by the development of means and methods which permit programming to communicate with equipment that is external to television receivers and radio receivers, particularly computers and computer peripherals such as printers**

**1981 Spec., Col. 1, II.36-41**

**Thus applicants' 1981 specification makes it clear that 'programming' is not just TV and Radio shows- It can also include instructions, codes, and signals that are communicated to and control e.g., computers and computer peripherals. These instructions, codes, and signals clearly fall within the definition of programming and to find otherwise is to conveniently and purposefully overlook the entire purpose of the Invention.**

(emphasis added)

In reading applicants' 1981 Specification, it seems that "**the entire purpose**" of *the invention*<sup>22</sup>, to which applicant alludes, was the ability to provide multimedia presentations in which TV or Radio "programming" was displayed along with another supplemental media presentation; wherein the content of the supplemental media presentation was related to the content TV and Radio "programming" thereby *enhancing* the content of the displayed TV and Radio "programming". To achieve this goal, ancillary "instruct signals" and/or other ancillary "information signals" were "associated" with, and "embedded" within, the TV or Radio "programming." These embedded "instruct and information signals" allowed received TV and Radio *programming* "to communicate" with equipment that was external to the TV and Radio receivers in order to produce the supplemental media presentation. Specifically, the associated "instruct and information signals", which were embedded within the received Radio or TV "programming", were themselves transferred to the external equipment thereby causing the external equipment to produce said supplemental media presentation. Being such, despite applicants' current allegations, it is still crystal clear from the 1981 disclosure itself that the 1981 "programming" terminology was used in the 1981 specification in the conventional sense of referring to TV and Radio signaling which represented scheduled TV and Radio shows. To suggest otherwise, e.g. in the words of applicant, is to "*conveniently and purposefully*" ignore the fact that applicants' 1981 specification unquestionably

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<sup>22</sup> The examiner notes that applicant's 1981 inventions appear to serve many purposes. Therefor, the examiner does not believe that "the invention" of applicant's 1981 specification has one "entire purpose" as is now alleged by applicant; i.e. if it does have one "entire purpose", then it is not clear to the examiner what that "entire purpose" actually is (clarification is requested).

describes the associated "instruct and information signals" as being separate/distinct entities with respect to the TV and Radio "programming" into which these associated "instruct and information signals" were embedded. This fact is self evident in the following excerpts taken from the 1981 specification itself:

"One method provides a technique whereby a broadcast or cablecast transmission facility can duplicate the operation of a television studio automatically through the use of *instructions and information signals embedded in programing* either supplied from a remote source or sources or prerecorded" (emphasis added) [lines 32-37 of column 3]<sup>23</sup>

"Signal processor, 71, has means, described above, to *identify and separate the instruction and information signals from their associated programing* and pass them, along with information identifying the channel source of each signal, externally to code reader, 72." (emphasis added) [lines 3-7 of column 11]

"The cable head end facility contains signal strippers, 81, 85, and 89, of which models exist well known in the art, that controller/computer, 73, can *Instruct to remove signals from the programing* as required, and signal generators, 82, 86, and 90, also known in the art, that controller/computer, 73, can *Instruct to add signals to programing* as required" (emphasis added) [lines 36-42 of column 12]

"One particular advantage of these methods for monitoring programming is that, by *locating the identifier signals in the audio and/or video and/or other parts of the programing* that are conventionally recorded by, for example, conventional video recorders, ..." (emphasis added) [lines 25-29 of column 16]

"Methods for Governing or Influencing the Operation of Equipment that is External to Conventional Television and Radio Sets by Passing *Instructions and Information Signal that are Embedded in Television and Radio Programing* Transmissions to Such External Equipment" (emphasis added) [Lines 34-38 of column 17]

"Signal processor apparatus have the ability to *Identify instruction and information signals in one or more inputted television and radio programing transmissions*" (emphasis added) [lines 39-41 of column 17]

"Microcomputer, 205, is preprogrammed to respond in a predetermined fashion to *instruction signals embedded in the "Wall Street Week" programing* transmission....These [embedded instruction] signals instruct microcomputer, 205, to generate several video graphic overlays..." (emphasis added) [lines 42-49 of column 19]

"At this point, an *Instruction signal is generated in the television studio originating the programing and is transmitted in the programing transmission*" (emphasis added) [lines 60-63 of column 19]

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<sup>23</sup> Citations have been obtained from US Patent #4,694,490.

**XXX**

**APPENDIX V:** (1987 "SPAM signals" VS 1981 "SIGNAL UNITS" AND "SIGNAL WORDS")

**1) The timeline:**

A) The *discarded*<sup>24</sup> 1981 parent specification:

- 1) The 1981 parent specification coined the term "signal unit" to refer to a sequence of bits representing a discrete instruction or data segment.
- 2) The 1981 parent specification coined the term "signal word" to refer to the appearance of a sequence of bits, representing one or more of said signal units (or portions thereof), at a given time and location of a TV signal transmission.
- 3) One column of the 1981 parent specification described a 1981 "Wall Street Week" embodiment of alleged invention in which the above described "signal words" and "signal units" carried simple commands/instructions which triggered each receiver station to execute locally stored computer programming/software to locally generate and locally display a user specific program related overlay.

B) The *new* 1987 CIP specification:

- 1) The 1987 CIP specification cosmetically carries the 1981 "signal unit" and "signal word" terminology and definitions forward into the first few pages (e.g. 1-27) of the 1987 specification;
- 2) These first few pages of the 1987 CIP specification (e.g. @ 20-27) also describe a first 1987 "Wall Street Week" embodiment of alleged invention that has been *expanded* with respect to the 1981 embodiment in that the "signal units" and "signal words" now carry/include computer software that is used to program the receiver stations (in addition to the simple commands that were conveyed by said "words"/ "units" in the 1981 "Wall Street Week" embodiment of the discarded 1981 specification) [i.e. there is a serious question, however, as to whether (and how) the described 1981 signal words/units, as carried forward into the 1987 CIP, were capable of handling such a continuous transmission];
- 3) At this point (note page 40), the 1987 CIP specification introduces a new "SPAM signal" format that replaces the 1981 "signal unit" and "signal word" format; the 1981 "signal unit"/"signal word" terminology and format is never discussed again within the remaining 500 pages of the 1987 CIP

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<sup>24</sup> "Discarded" in the sense that the 1981 disclosure was not incorporated into the 1987 CIP specification in any immediately discernible fashion; i.e. the 1981 disclosure was neither copied into the 1987 CIP specification nor was it incorporated by reference. Therefor, the new 1987 CIP specification stands alone as the instant specification from which all section 112 issues depend.

specification that follow. In fact, the new 1987 "SPAM signal" terminology is defined in the 1987 CIP specification to be:

*Signal Processing Apparatus and Method signals of the present invention(s)*

This definition leaves little doubt that it is this new 1987 SPAM signaling that is used by the disclosed/claimed 1987 inventions of instant 1987 CIP specification; i.e. in spite of the fact that the 1981 "signal unit" and "signal word" terminology initially appear at the beginning of the 1987 CIP specification. Also of significance, is the fact that it is only this newly introduced 1987 SPAM signal format that provides an adequately disclosed mechanism by which continuous sequences of codes, e.g. computer programming/software, can be conveyed to the receiver stations [i.e. it was the introduction of the 1987 SPAM signals in the 1987 CIP specification which "enabled" such continuous code transmissions];

4) Also, buried within these next 500 pages of the 1987 CIP specification are further expanded 1987 "Wall Street Week" embodiments which allegedly build on the first expanded 1987 embodiment but which, in reality, totally abandon the 1981 "signal unit" and "signal word" data format in favor of the newly introduced 1987 SPAM signal format. This is evident by the following:

- a) By the fact that the term "signal word" takes on a completely new/different meaning within these 500 pages (i.e. that the "signal word" terminology now refers to the bytes of digital data that make up the SPAM signals rather than the time/location in the TV transmission at which the signaling is inserted); and
- b) The definition of the "SPAM signal" terminology itself indicates that "SPAM" signaling was the discrete signaling of the 1987 inventions:

*Signal Processing Apparatus and Method signals of the present invention(s).*

The timeline shows: That applicants 1981 parent specification first coined the "signal unit" and "signal word" terminology to described the process by which the simple instructions and information of the 1981 inventions were transported within the VBI of TV programming (e.g. the 1981 "Wall Street Week" embodiment). The simple instructions and information of the 1981 inventions were not described as having transported computer software despite applicants' allegation to the contrary [See appendix IV of this Office action].

The noted 1981 "signal unit" and "signal word" terminology and definitions were themselves carried forward into the first few pages of the 1987 CIP specification. However, the relevance of this 1981 signal unit/word terminology and format was short lived in the 1987 specification. That is, the 1987 CIP specification immediately attempted to expand the scope/utility of the 1981 terminology via the first 1987 "Wall Street Week" embodiment of pages 20-27 to include/handle continuous sequences of data representing computer software; although the way in which said 1981 words/units were supposedly configured to carry computer software was never addressed or explained by the 1987 CIP. Instead, the 1981 "signal unit" and "signal word" terminology and format was immediately discarded in favor of the 1987 SPAM signal terminology and format which was, by definition, the signaling "of the 1987 inventions.

**2)** The 1981 auxiliary signaling of the 1981 inventions of the 1981 specification were described as having transmitted 1981 "signal units." As described in the 1981 specification, each of these 1981 signal unit represented either:

- 1) A complete signal instruction; or
- 2) A complete information message unit.

[NOTE: lines 66 and 67 of column 2 in US patent #4,704,725]

The content of these 1981 signal units were explicitly exemplified by the 1981 specification as having comprised:

- 1) A unique code identifying a program unit;
- 2) A unique purchase order number; and
- 3) A complete general instruction identifying whether a programming unit was to be retransmitted immediately or recorded for delayed transmission.

[NOTE: lines 68 and 69 of column 2, and lines 1-4 of column 4 in US patent #4,704,725]

Clearly, as described, all three of these listed "signal unit" contents:

- 1) Represented digital codes that functioned to "cue"/"trigger" some kind of response or action by receiver side circuitry of the system; and
- 2) Were, or would obviously have been, represented by digital codes of a relatively small or limited number of digital bits.

More significantly, there is not a single description within the 1981 specification of a 1981 "signal unit" content that:

- 1) Did not function simply to "cue"/"trigger" some kind of receiver side response or action; and
- 2) Was not, or could not be, represented by a digital code of a limited number of bits.

And most significantly, there is not description (or even a suggestion) in the 1981 specification of a 1981 "signal word" content comprised of computer programming/software.

Early on, the instant 1987 CIP specification seems to indicate that the 1981 "signal unit" terminology has been carried forward into, and will be used throughout the instant 1987 CIP specification, in a fashion that is unenhanced and unmodified from the way it was defined and used in the original 1981 specification [SEE: lines 17-24 in column 10 of US Patent #5,335,277]. This is simply untrue. The following is noted:

- 1) The instant 1987 CIP specification purports to describe a first embodiment of invention which, allegedly, utilizes the 1981 "signal units" of the 1981 specification [SEE the discussion under the heading "One Combined Medium" that begins in line 50 of column 12 of US Patent #5,335,277]. However, in this described 1987 embodiment of invention, the described 1987 "signal units" were not limited to signal units that simply "cue"/"trigger" receiver side responses and actions as in the case of the 1981 signal units of the 1981 inventions, but the 1987 signal units were somehow enhanced and modified relative to the 1981 "signal units" so as to be used, allegedly, to download entire sequences of digital code representing computer programming/software that actually defined the receiver side responses and actions that are to be "cued"/"triggered" by subsequently transmitted 1987 signal word digital codes [NOTE: lines 20-50 in column 15 of US Patent #5,335,277].

That is, wherein the 1981 inventions of the 1981 specification transmitted 1981 "signal units" which "cued"/"triggered" various kinds of receiver side responses and actions, the 1987 "signal units" used by the first described 1987 embodiment allegedly transmitted computer programming/software which defined, e.g. on the fly, the responses and actions that were then "cued"/"triggered" on the receiver side by subsequently transmitted digital codes. However, it is not clear from the 1987 specification how the 1981 "signal word" and 1981 "signal units" format of the 1981 specification has itself been enhanced/modified so as to be capable of handling the long sequences of digital code required to transmit such computer programming. In fact the 1987 disclosure never appears to provide such an explanation and instead introduces a new 1987 SPAM signal format which actually provides the mechanism by which such software is transported.

Thus, the 1981 "signal unit" and "signal word" terminology is: initially carried forward into the 1987 specification; is immediately expanded so as to encompass computer software; and is then discarded in favor of SPAM signaling. This process only gives the illusion that the 1987 SPAM signals and the 1981 signal words/units somehow represent "common subject matter".

**3) The specification of applicants' 1981 parent application and the specification of applicants' instant 1987 CIP specification describe respective 1981 and 1987 systems/methods which define respective 1981 and 1987 inventions. In the broadest sense, the 1981 systems/methods of the 1981 parent specification and the 1987 systems/methods of the instant 1987 CIP specification have some clear and obvious similarities. One of these similarities being that the 1981 systems/methods and the 1987 CIP systems/methods operated to embed respective 1981 and 1987 auxiliary signaling within the VBI of broadcast/cablecast TV programming wherein the embedded auxiliary signaling of both the 1981 and the 1987 systems/methods was used to control processing that was performed at downstream TV receiving station locations; i.e. wherein, in at least some of the cases, the 1981 and the 1987 processing was, likewise, similar. However, given the clear and obvious similarities, the 1987 systems/methods of the instant 1987 CIP specification are also very different from the 1981 systems/methods of the 1981 parent specification. For example, while both 1981 and the 1987 systems/methods used respective 1981 and 1987 auxiliary signaling to control downstream processing within respective 1981 and 1987 television networks, the respective 1981 and 1987 auxiliary signaling itself was very different in form, content, and function:**

**1) FORM OF THE 1981 AND THE 1987 AUXILIARY SIGNALING:**

As described in the 1981 parent specification, 1981 auxiliary signaling of the 1981 apparatus/methods was used to transmit discrete 1981 "signal units", wherein each of these discrete "signal units" represented a "complete instruction or information message unit"; i.e.,

- a) A unique code for identifying a programming unit;
- b) A unique purchase number; or
- c) A general instruction.

As described in the 1981 parent specification, the 1981 apparatus/methods used 1981 "signal words" to transport these 1981 "signal units" through the 1981 TV and Radio networks, wherein each 1981 "signal word" was explicitly defined by the 1981 specification as a "discrete appearance" of 1981 auxiliary signaling within a TV/Radio transmission. More specifically, each 1981 "signal word" (i.e.

that is, each "appearance" of the auxiliary signaling at a given time and location within the video/audio transmission) comprised a string of one or more data bits encoded together on a single line of the video or sequentially in the audio, wherein this string of one or more data bits was assembled from the bits of one or more of said 1981 "signal units". Significantly, as described in the 1981 specification, it was the discrete 1981 "signal words" (i.e. that is, each appearance of auxiliary signaling at a given time and location within the TV/Radio transmission) that were to have comprised added bits for identifying the beginnings and ends of each of the 1981 "signal word"; i.e. providing a clear indication that the 1981 "signal words" represented the 1981 transport packet mechanism of the 1981 systems/methods. Further, from such 1981 descriptions/definitions, it seems quite apparent that the 1981 auxiliary signaling of the 1981 specification was transmitted *synchronously* with the respect to the TV/Radio transmission into which it was embedded [i.e. that is, both the bits of the "signal units" and the bits of the "signal words" were themselves embedded at specific timings/locations within TV/radio transmission wherein these specific timings/locations had to be known by (i.e. preprogrammed within) the receiver station locations prior to transmission of said 1981 auxiliary signaling]. This *synchronous* nature of the 1981 auxiliary signaling appears to be confirmed by descriptions found throughout the 1981 specification:

"In addition, the pattern of the composition, timing, and location of the signals may vary in such ways that only receiving apparatus that are *preinformed* regarding the patterns obtain at any given time will process the signals correctly. Both the arrangement of signal units in the signal words and the locations, timings, and lengths of signal words in individual transmissions or groups of transmissions may vary in fashions that can only be interpreted accurately by apparatus that are preprogrammed with keys to such variations" (emphasis added)

"The controller, 20, can instruct signal decoders, 30 and 40, when, where, and how to look for signal words, which allows signal words to be received in any pattern or patterns. It can instruct buffer/comparator, 8, how to assemble signal words into signal units and join units for further transfer  
..."

*In contrast to the above*, the instant 1987 CIP specification explicitly coined the term "SPAM" to mean:

"Signal Processing Apparatus and Methods of the present invention";

i.e., wherein said "*present invention*" is that which is described and claimed only with respect to the instant 1987 CIP specification. The 1987 CIP specification uses the term "SPAM signals" to refer to the 1987 auxiliary signals of said

"SPAM" (again, wherein "SPAM" is *Signal Processing Apparatus and Methods* of the invention(s) of the 1987 CIP). These 1987 "SPAM signals" are explicitly described and shown via figures 2E-2K of the instant 1987 CIP specification. As described/illustrated with respect to figures 2E-2K, the 1987 auxiliary "SPAM" signaling of the 1987 CIP specification comprised different types of discrete SPAM packet signals, wherein certain ones of these discrete SPAM packet signals comprised "information segments" for transporting variable length payloads of digital information. In the case of this 1987 auxiliary "SPAM" signaling, it was the discrete 1987 SPAM packets themselves that contain synchronization and identification codes used by the receiver/decoder side; i.e. as opposed to each "appearance" of the auxiliary signaling at a given time/location of the TV/Radio transmission (that is, as opposed to the 1981 "signal words" that were used by the 1981 systems/methods). This *modification* in the format of the 1987 CIP auxiliary signaling, with respect to the 1981 auxiliary signaling, imparts significant advantages to the 1987 CIP apparatus/methods over the 1981 apparatus/methods. Namely, the 1987 SPAM signal format allows the discrete SPAM packet signals of the 1987 apparatus and methods to be assembled and sequentially embedded back-to-back, one after another, throughout the entire "normal location" of the TV/Radio transmissions (i.e. throughout the entire selected line intervals of the VBI in the case of TV transmissions). That is, the 1987 "SPAM" transport packet format of the 1987 CIP specification is clearly advantageous over the discrete 1981 "signal word" format of the 1981 specification in that it enables the discrete SPAM packets of the 1987 apparatus/methods to be transmitted continuously and *asynchronously* with respect to the "normal locations" of the TV signaling, thereby advantageously:

- a) Enabling full use of the entire bandwidth that is available for the transmission of auxiliary signaling;
- b) Enabling the receiver station to detect and determine the specific timing/locations of the bits of the desired/required auxiliary signaling within said "normal locations" without have know and/or be informed of said location in advance of receiving the auxiliary signal transmission; and
- c) Enabling said available bandwidth adaptively devoted to sources based on need/demand.

Significantly, all of the 1987 embodiments of invention that were described in the instant 1987 CIP specification are "SPAM" methods/apparatus which were implemented using said discrete 1987 "SPAM signals" of figures 2E-2K of the 1987 disclosure.

*In summary*, it seems quite apparent that form of the discrete 1987 "SPAM signal" transport packets of the 1987 CIP SPAM methods/apparatus is different

from, and advantageous over, the form of the discrete "signal word" *transport packets* of the 1981 parent methods/apparatus. This difference is evident in the fact that the 1987 SPAM packets are sequentially transmitted *asynchronously*, e.g. one after another, throughout the entire "normal location" of the TV/Radio transmission wherein there is not a one-to-one correspondence between "SPAM" signal packets and "appearances" within the transmission, whereas each 1981 "signal word" *transport packet* of the 1981 parent methods/apparatus was transmitted *synchronously* within a predetermined interval of the TV/Radio transmission wherein there was a one-to-one correspondence between "signal words" and their appearances within the transmission (i.e. each 1981 "signal word" was, by definition, the discrete "appearance" of auxiliary signaling at a given time and location (i.e. a specific horizontal line of the VBI) within a TV/Radio transmission).

Likewise, it also seems quite apparent that the discrete 1987 "SPAM signal" transport packets of the instant 1987 CIP methods/apparatus are unquestionably different from the discrete "signal units" of the 1981 parent methods/apparatus too for reasons evident in the following:

- a) In the fact that the 1987 SPAM signal packets clearly represent the transport mechanism by which different complete instruction and information message units are conveyed through the 1987 TV/Radio network whereas the 1981 "signal units" of the 1981 disclosure represented the complete instruction and message units which were to be transmitted; and
- b) In the fact that the 1987 SPAM signal packets include synchronizing information, e.g. such as the EOF (end-of-field) codes, by which the receiver/decoder detects the end of a previous SPAM packet and the beginning of the next packet (i.e. meaning that location of the data of the SPAM packets need not be known by, or preprogrammed into, the receiver stations in advance of transmission (i.e. not the case with the 1981 "signal units" of the 1981 specification)).

And while it is true that the 1981 "signal unit" and the 1981 "signal word" terminology and definitions were included at the beginning of the instant 1987 CIP specification, the reason for their presence (i.e. how they relate to the 1987 "SPAM" and the 1987 "SPAM signals") is confusing and unclear. This is because:

- a) *All* of the 1987 SPAM embodiments of invention that are described within the 1987 CIP specification are, by definition, "SPAM" systems/methods which are implemented, by definition, using 1987 "SPAM signals" (i.e. 1987 CIP specification explicitly coining the "SPAM" terminology to mean: "**Signal Processing Apparatus and Methods of the present invention**");

b) The 1981 "signal word" and 1981 "signal unit" terminology and definitions appear to "hang" by themselves within the 1987 CIP specification; i.e. a connection between this 1981 terminology and the 1987 SPAM disclosures is never explained or established.

The true extent of this "disconnect" seems to be evidenced in the fact that the same "signal word" terminology takes on an completely new and different meaning everywhere else that is appears in the 1987 specification (this in spite of the fact that the 1981 "signal unit", as carried forward into the 1987 CIP specification, explicitly states, quite erroneously, that the 1981 "signal word" definition will be used and adopted throughout the entire 1987 CIP specification).<sup>25</sup>

## 2) CONTENT AND FUNCTION OF THE 1981 AND THE 1987 AUXILIARY SIGNALING:

The 1987 auxiliary signaling was described as, and was clearly capable of, transporting continuous code sequences such as computer software whereas the 1981 auxiliary signal was not described as, and does not appear to have been, capable of carrying continuous codes sequences such as computer software [SEE appendix III of this Office action]

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<sup>25</sup> When describing 1987 "SPAM" and 1987 "SPAM signals", the 1987 disclosure uses the term "signal word" in a conventional sense to refer to bytes of digital data whereas the 1981 disclosure/definition explicitly defined it to be: "the appearance of auxiliary signaling within a TV/Radio transmission."

**XXX**

**APPENDIX VI: (A List of Common Issues)**

**THE "LIST":**

1) In lines 2-8 on page 142 of the amendment filed on 1/28/2002 in application SN 08/470,571, applicants suggest that the examiner has objected to the fact that applicants provided citations showing dual support for the claims with respect to both the 1981 and 1987 disclosures. No such objection was ever been raised by the examiner. To the contrary, the examiner finds applicants' citations of dual 1981 and 1987 support to be one of the most helpful aids that applicants have provided to date when applicants' allege priority to the 1981 filing date (i.e. especially when presented in the form of claim charts).

Having said this, the fact remains that examiner/Office was unquestionably misled by the many statements made by applicants concerning the "consequences" of Section 120 "priority". The reason that these statements misled the examiner/Office seems to be self-evident from the statements themselves. For example, in the last 7 lines on page 24 of the Appeal Brief filed in SN 08/113,329 on 9/17/1996, applicants state:

**"The case law makes clear that the only inquiry concerning claims filed in a subsequent continuation application pursuant to Section 120 is whether they are adequately supported in under Section 112, first paragraph, in the Initial application. If the support exists, the Inquiry is at an end."**

And statements made in the remarks section of many of applicants' amendments in which applicants state:

**"The present application claims priority under 35 USC §120 of the following applications.....Consequently, Applicants will demonstrate disclosure only with respect to the '81 case,..."  
[e.g. see lines 9-21 on page 000507 of the Appendix in the document mailed on 9/10/01 in SN 08/474,139]**

These statements misled the examiner/Office into believing that, as a consequence of Section 120, applicants were permitted to use the disclosure of their 1981 parent application alone, e.g. in place of the instant 1987 CIP disclosure, to fulfill section 112 requirements when addressing/replying to Section 112 rejections (i.e. in those situation which the 1981 priority date was alleged). However, the examiner/Office now understands that, because applicants' past 1981 parent disclosure was not incorporated into the instant disclosure, the 1981 specification cannot be relied upon by applicants for showing of section 112 support when addressing/responding to rejections made under Section 112; i.e. all section 112 Support must come from the instant "1987" CIP disclosure alone.

The "objections" made by the examiner in 08/470,571 were raised because the examiner perceived a continuation, on the part of applicants, of the same arguments that misled the examiner/Office in the first place. By raising these "objections", the examiner hoped to elicit a response from applicants acknowledging the fact that the instant "1987" disclosure was the only disclosure which could be used to fulfill the requirements of section 112 with respect to the limitations of the currently pending amended claims (the significance of the 1981 disclosure is relegated only to the secondary issue of Section 120 priority). The examiner wanted to be sure that the examiner and applicants were now on the same page concerning this issue. And, on at least one occasion, such an acknowledgment appears to have been provided by applicants [see the last 5 lines on page 141 of the amendment filed on 1/28/2002 in SN 08/470,571].

2) Applicants do not believe that "common subject matter" is required for "priority" under Section 120. Instead, according to applicants, the only thing that applicants need to do in order to obtain the earlier 1981 filing date for their currently pending amended claims, is to show that each of his pending amended claims can be given different 1987 and 1981 claim interpretations which allows each claim to be supported, in parallel, by "different subject matter" from the 1981 and 1987 specifications.

**[Section] 120 does not require an applicant to demonstrate that the disclosures relied upon under §120 have anything in common besides their ability to separately comply with §112-1 with respect to the claims for which priority is sought. Accordingly, the Examiner's focus on comparing the support from the two applications for similarity or common subject matter is improper and irrelevant because all applicants are required to do is satisfy §120 is show that each disclosure meets the requirements of §112-1 for a given claim."**  
(emphasis added)

[Page 141 of applicants' response filed on 1/28/2002 in application S.N. 08/470,571]

**"Accordingly, the law requires a two part test in which the applicant separately demonstrates § 112 support for each application. In the FOA, the examiner distorts this straightforward test by imposing a third element of the test whereby the § 112 support from each application consists of 'common subject matter.'"**  
(see the last 10 lines on page 137 of the response filed on 1/28/2002 in SN 08/470,571).

For the reasons that have been in appendix II addressed above, applicants' position seems to be in error. Namely, applicants appear to be confusing the requirements of "anticipation" under section 102 with the actual requirements of

"adequate written description" under section 112-1 that has literally been incorporated into section 120.

**'However, as mentioned earlier, a continuing application is entitled to rely on the earlier filing date of an earlier application only with respect to subject matter common to both applications'** (emphasis added)  
[In Transco Products, Inc., v. Performance Contracting, Inc., 32 USPQ2d 1077 [\*\*18]]

**'Any claim in a continuation-in-part application that is directed solely to subject matter adequately disclosed under 35 U.S.C. 112 in the parent application is entitled to the filing date of the parent application.'**  
[In Transco Products, Inc., v. Performance Contracting, Inc., 32 USPQ2d 1077 [\*\*18]]

**'Assuming the common inventorship, copendency, and cross-reference required by section 120, that section further requires only that the invention be disclosed in the parent application in such manner as to comply with the first paragraph of section 112 and be the same invention as that disclosed in the later application.'** (emphasis added)  
[Kirschner, 305 F.2d 897 (C.C.P.A 1962)]

3) In the last 5 lines on page 141 of the response filed on 1/28/2002 in 08/470,571, applicants acknowledged that the 1981 application was not incorporated into the 1987 application. As a consequence, applicants also appear to understand that all Section 112 support must come solely from the "instant" 1987 disclosure if the requirements of section 112 are to be satisfied. If applicants know such to be true, then it is not understood how or why applicants still adopt the following position:

**'the [examiner's] assumption that 'all limitations of the currently pending claims are necessarily directed to that which is described in the present 1987 disclosure' is mistaken and wholly unsupported.'**<sup>26</sup>  
[lines 8-10 on page 144 of the amendment filed in 08/470,571 on 1/28/2002].

Namely, if all section 112-1 support for all of the claims' limitations must necessarily come from the instant "1987" disclosure alone (e.g. in light that the disclosure of the 1981 parent was not formally incorporated into the instant 1987 disclosure), then how can a limitation of a claim be directed to (i.e. and obtain required section 112-1 support from) anything but that which is described within the said instant 1987 disclosure?

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<sup>26</sup> Contrary to applicants' position, the examiner maintains that a pending claim must necessarily be directed to that which is described in the instant specification. This is not to say that the resulting scope of the pending claim is limited only to that which it must necessarily be directed.

4) Applicants continue to allege that displayed teletext images do not constitute "locally generated" images. Applicants are wrong [SEE paragraph C-3 of this Office action].

5) Applicants' 1987 inventions used a "SPAM" transmission packet structure to transmit ancillary information through the TV broadcast networks. By using the "SPAM" packet structure, a transmission scheme was established in which a piece of coherent "information", e.g. such as a complete "processor instruction", could be broken down into a plurality of "partial information" segments and communicated through the TV network within/as respective "discrete (packet) signals". On the receiver side of the 1987 inventions, the partial information from the plurality of discrete signals could be recovered and re-organized back into the original piece of coherent "information (e.g. re-organized back into the single complete processor instruction).

Applicants have alleged the above described "partial information" transmission scheme is a key feature which distinguishes applicants' alleged 1987 inventions over Teletext "prior art". Applicants' allegation represents a huge misunderstanding/misrepresentation of the Teletext "prior art". In fact, via such arguments, it appears that applicants are effectively trying to re-invent a foundation on which the Teletext "prior art" was actually built [e.g. see the arguments which begin at the top of page 354 and extend to the bottom of page 356 in the response filed on 1/28/02 in SN 08/470,571].

Specifically, standardized Teletext was based on the recognition that vacant lines occurring during the VBI of TV signal transmissions could be used to transmit/communicate embedded frames/"pages" of character/graphics information along with the TV programming. However, it was immediately recognized that each video line did not have sufficient bandwidth to carry an entire frame/page of the character/graphics data. Therefor, the prior art Teletext systems established Teletext packet structures by which "partial image/information" segments (e.g. such as single "rows" of character and control information) could be communicated via respective discrete packetized signals which were embedded within respective discrete television line intervals. On the receiver side of the Teletext "prior art", the partial information segments from the plurality of discrete packetized signals were recovered and re-organized back into the original frame/pages of character/graphics information in order to "locally generate" a Teletext image for display. However, the correlation that exists between applicant's "SPAM" transmission scheme and prior art Teletext transmission schemes does not end here!

In addition to the transmission of character/graphic frames/pages, those of ordinary skill in the art quickly recognized that the prior art Teletext transmission schemes could be "extended" so as to carry other kinds of information; e.g. "Telesoftware"(i.e. computer programming), remote control signaling, etc,...

This additional information was carried using the same packetized Teletext structure previously established for the character/graphic image data. For example, Telesoftware was also broken down into "partial information" segments to be carried as "rows" of character-like data within respective Teletext packets of one or more Teletext pages (e.g. depending on the size of the Telesoftware program that was being communicated). On the receiver side, the "partial information" segments of the additional information were then recovered from the transmitted discrete packet signals and were re-organized back into its original form (e.g. the complete "Telesoftware" program was reconstructed from the discrete partial programming segments).

For the reasons discussed above, it appears that applicants' 1987 packetized "SPAM" structure constitutes applicants' version of an "extended" Teletext system [SEE part "A." under "Section XI" in the Office action mailed 8/27/01 in SN 08/470,571]. And, for the reasons discussed above, the examiner continues to refute applicants' position that claim recitations directed to "discrete signals" and/or "partial information" add anything to the claims which would avoid/overcome Teletext "prior art" applied under sections 102 or 103.

6) Applicants point out that term "computer software/programming" has been defined as: "a series of instructions that controls the operation of a computer". Stretching this definition, applicants erroneously suggest that the term "computer software" encompasses: "any series of instructions that controls the operation of a computer". And finally, using this stretched definition, applicant argues that each series of transmitted cuing-type codes which were described in his 1981 parent application *implicitly* taught the transmission and/or downloading of "computer software" in view that each of these series of codes represented "instructions which controlled the operation of a computer". Applicants' argument is lame. That is, if one were to accept applicants' argument, then:

- a) A computer mouse and computer keyboard suddenly become generators of "computer software" because they too generate series of instructions that are used to control the operation of a computer;
- b) Teletext data itself, when received by a CPU implemented decoder, suddenly becomes "computer software" because it too represents series of instructions which are used to instruct a computer as to how to generate an image for display;
- c) etc,...

Clearly, applicants' argument twists the definition of "computer software" in a way that is repugnant to its conventional use/meaning in order to obtain alleged "support" as of the 1981 filing date for something that was not shown to be in his

possession, i.e. was not disclosed, until the filing of his 1987 CIP application; e.g. namely, the downloading of computer software.<sup>27</sup>  
[SEE appendix IV of this Office action]

7) While applicants have alleged that 1987 "computer software/programming" recitations should be stretched so as to retroactively find section 112-1 support from things which were not "computer software/programming"<sup>28</sup> (i.e. a series of cuing-type codes/signals from the 1981 disclosure), applicants have also taken the opposite approach by alleging that circuit structures which operated to process/execute teletext signals (i.e. specifically Teletext decoders) are not encompassed by the "signal processor" recitations of ones of their pending amended claims.<sup>29</sup> The examiner disagrees noting that such arguments are in conflict with applicants' own written description [e.g. note lines 37-38 in column 205 of applicants' own US Patent #5,335,277]. Specifically, not only are Teletext decoders "signal processors" in any conventional sense of such terminology, but Teletext decoders are in fact "signal processors" within the context of applicants' own alleged invention. More to the point, the Teletext decoders of the applied prior art are like the "SPAM" decoders of applicants' own alleged inventions in that both decoders operated to extract, process, and execute packets of encoded information/instructions distributed to them, at least "*preferably*", via the VBI of broadcasted and/or cablecasted TV programming [see section c of this Office action]. Namely, the packets of encoded information comprised *Teletext data packets* in the case of conventional Teletext decoders and comprised *SPAM data packets* in the case of the SPAM decoders of applicants' alleged invention.<sup>30</sup> Applicants' suggestion that conventional Teletext decoders should somehow be excluded by the "signal processor" recitations of his pending claims is, "NONSENSE."<sup>31</sup>

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<sup>27</sup> In the supplemental response filed 5/06/2002 in 08/470,571, applicant now submits a different version of essentially the same argument [see part "P" in "SECTION I" of the latest Office action mailed in 08/470,571].

<sup>28</sup> This erroneous *reading* has been used to allege a 1981 "priority" date for claim recitations which are directed to the 1987 "computer software/programming" features of the instant 1987 CIP specification.

<sup>29</sup> This erroneous *reading* has been used to try to distinguish which is claimed over applied teletext "prior art".

<sup>30</sup> In fact, for reasons which will be addressed in more detail below, the examiner maintains that the "SPAM" data packets of applicants' alleged invention represent, for all intents and purposes, little more than applicants' own version of a Teletext system in which the function of its Teletext data packets have been "extended" so as to carry more than just the normal displayable character/graphics code (e.g. "extended" to carry control signals, Telesoftware, etc,...).

<sup>31</sup> NOTE:

1) That *typical* Teletext decoders sequentially performed steps of signal slicing/separation, serial-to-parallel conversion, signal storage, ASCII code to pixel data translation, etc... all which were recognized as having comprised steps of "signal processing" [the last 16 lines on page 5 of the appendix that is attached to the "PETITION FOR RULEMAKING" which was filed with the FCC on 3/26/1981 by the "United Kingdom Teletext Industry Group" which explicitly indicates Teletext decoders as having performed "signal processing"]; and

8) The examiner has always maintained that applicants' own 1987 "SPAM" transmission scheme, as described in the context of television distribution, constitutes applicants' version of an "extended Teletext system".<sup>32</sup> However, when Teletext "prior art" has been applied against applicants' claims, applicants become hostile to the suggestion that there is any correlation between their "SPAM" transmission system and conventional Teletext transmission systems.<sup>33</sup> Yet, on the other hand, applicants appear to openly believe that the scope of many pending claims encompass the "WEATHER STAR" system/receiver technology which, to the extent understood by the examiner, is a Teletext based technology.<sup>34</sup> If applicants' claimed "SPAM" systems/receivers encompass Teletext based systems/receivers such as the "WEATHER STAR" system/receiver technology, then how can applicants possibly suggest that "SPAM" and Teletext are not correlated/analogous technologies?

9) Applicants and applicants' originally filed 1987 disclosure both seem to have alleged that "digital television signals/programming", of the type that is recited in many of applicants' pending amended claims, was notoriously well known in the art at the time of their alleged invention. The examiner has challenged these allegations and has requested that applicants submit "prior art"/evidence that shows such to be true. In response to the examiners' request, applicants have submitted U.S. Patent #3,906,480 to Schwartz et al. as allegedly evidencing the conventional "digital television signal" technology on which their disclosure and amended claims were/are based [note the last 11 lines on page 97 and lines 3-6 on page 98 of the amendment filed on 6/7/2000 in SN 08/470,571]. The examiner continues to be mystified by this submission. The examiner points out that the cited Schwartz et al. patent describes a computer display system in which a computer was used to generate, albeit digitally, *frames* of vector encoded graphic/character information which were then transferred, via a data

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2) that such processing was even true in the unusual "ideograph" decoders of applicants' argument [i.e. see the block labeled "Teletext signal processor" in figure 10 of the NHK article "A Teletext System for Ideographs" by Numaguchi et al. ].

<sup>32</sup> The term "extended Teletext" is being used here to refer to Teletext systems that have been "extended" so as to carry other types of information beyond the normal/typical coded Teletext character/graphic information. One alleged novel feature of applicants' SPAM packets was its ability to carry and distribute computer software. However, contrary to applicants' allegation, packets of "extended Teletext" systems had long been used to carry and distribute computer software too. In fact, the term "Telesoftware" had been specifically coined so as to refer to the "software" that was carried by "extended Teletext systems. The point being, that SPAM and Teletext data packets are equivalent right down to their recognized ability to carry other forms of information including "Telesoftware".

<sup>33</sup> Yet a large portion, if not the majority, of the "prior art" cited by applicant pertains to Teletext.

<sup>34</sup> SEE: the article "Landmark forms cable weather news network" which is already of record.

bus, to "digital TV monitors" for display thereon. As far as the examiner can tell, the Schwartz et al. disclosure has absolutely nothing to do with the transmission of "digitized TV signals/programming" in any conventional sense of such terminology. Simply trying to figure out how the Schwartz et al. patent might be related to anything that was originally disclosed by applicants in their 1987 disclosure, much less trying to figure out how it might be used to "enable" that which was originally disclosed by applicants in their 1987 disclosure, represents an invitation to experimentation unto itself. If Schwartz et al. was cited out of necessity (e.g. if it actually represents the best showing of his "digital television" recitation that applicant is/was aware of), then its very presence in the record goes to support the examiner's position that which is now claimed by applicant, i.e. via the subsequently introduced "digital television" recitations, was not supported and/or enabled by applicants' originally filed 1987 disclosure (much less the 1981 disclosure to which priority is often sought).

10) Applicants have made many attempts to have the Zaboklicki prior art [DE 2,914,981] removed from consideration. In some responses [e.g. the communication filed 7/13/2000 in 08/470,571], applicants have argued that the applied Zaboklicki reference should be removed from consideration simply because the teachings and descriptions provided by this prior art reference differ from teachings and descriptions provided by another non-applied members of its patent family (namely, GB #2,016,874). Such a position is absurd. If Zaboklicki DE 2,914,981 teaches that which applicant now claims, then the fact that Zaboklicki GB #2,016,874 might not have provided these same teachings (even if proven true) is irrelevant to the fact that the claims ARE unpatentable over Zaboklicki DE 2,914,981. <sup>35</sup>

11) Within the originally filed abstract of applicants' 1981 past parent specification (i.e. note S.N. 06/317,510), the term "programming" was explicitly defined to mean:

**"everything transmitted over television or radio intended for communication of entertainment or to instruct or inform".**  
[see lines 4-7 in the abstract of US patent #4,694,490]

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<sup>35</sup> It is important to note that Zaboklicki [DE 2,914,981] included an extensive "List of References" section that described the operation of the Zaboklicki system element-by-element. This section was absent from Zaboklicki [GB 2,016,874]. This additional description in Zaboklicki [DE 2,914,981] is not trivial in that it goes a long way to understanding the invention which was disclosed in the applied Zaboklicki prior art; e.g. namely DE 2,914,981 (not GB 2,016,874).

This definition appears to be in conflict with applicants' present needs (e.g. it goes to refute applicants' claim to the earlier 1981 priority date<sup>36</sup>). Being such, applicants have argued that this explicitly stated definition should be ignored and given no weight because it appears in the "abstract" of the 1981 disclosure and, applicant alleges, the abstract was not *technically* part of his 1981 written description. The examiner points out: that the originally filed abstract was most certainly part of the originally filed disclosure of the 1981 parent application on which all issues must be considered/based; and, more importantly, that the definition of "programming" that was provided by this originally filed abstract is simply an explicitly statement of the way that "programming" terminology was used throughout the 1981 disclosure. That is, in the context of the 1981 specification itself, the term "programming" was clearly used to refer to scheduled TV or Radio shows.

**12) Applicants seem willing to acknowledge that the "inventions" that are described in the instant 1987 CIP specification are, in at least in some ways, "expanded"/"enhanced"/ "improved" versions of the "inventions" that were described in applicants' past 1981 parent specification.**

**"In fact, both [the 1981 and 1987] specifications describe the Inventions disclosed in the 1981 specification, although the 1987 specification contains many enhancements and improvements."**

[see the last two lines on page 9 of applicant's supplemental response filed 5/6/02 in SN 08/470,571]

One of the "enhancements and improvements" that was effected via the subsequent filing of instant 1987 CIP specification was a change made to the definition of the word "programming." Whereas the past 1981 Parent specification defined the terminology as referring to Television and Radio transmissions, the instant 1987 specification "improved and enhanced" the 1981 definition of "programming" to explicitly cover "all forms of electronic transmission" now explicitly including "computer programming", "broadcast print", etc,... (e.g. additions to the radio/TV transmission of the past 1981 definition).

**"everything that is transmitted over television or radio Intended for communication of entertainment or to instruct or inform";**  
**[ "programming" as defined in the past 1981 Parent specification]**

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<sup>36</sup> The examiner notes that applicant is only entitled to the 1981 priority date for "common subject matter"; i.e. the "same" subject matter that is commonly found in both the present 1987 and the 1981 parent disclosures as originally filed. However, the term "programming" itself does not represent "common subject matter" required for priority because the definition given to it within the present 1987 disclosure is vastly different than the definition given to it via the 1981 parent. Specifically, whenever the "programming" terminology is used in a currently pending claim, section 112-1 demands that it be held to the definition that is explicitly provided via the present 1987 disclosure. This 1987 definition is not entitled to the 1981 priority date in view that the 1981 disclosure explicitly gave the same terminology a different meaning.

**"everything that is transmitted electronically to entertain, instruct, or inform including television, radio, broadcast print, computer programming, as well as combined medium programming".**  
**[ "programming" as defined in the instant 1987 CIP specification]**

Thus, whereas a member of the public (e.g. a potential infringer) might have reasonably believed that applicants' claims pertain to subject matter within Television and Radio program transmission arts given the 1981 definition of "programming" (e.g. that the claimed invention does not pertain to computer software/programming transmissions), the wiggle room for such a belief/finding has been eliminated when the identically worded claims derive their required section 112-1 support from description that is provided within 1987 CIP specification instead; i.e. being that the 1987 specification replaces the 1981 definition of "programming" with the new "improved and enhanced" 1987 definition of "programming" which has been "expanded" to explicitly covers "all forms of electronic transmission" including, i.e. explicitly, said "computer programming" transmissions.<sup>37</sup> Being such, the examiner asks:

**Why should any applicant be allowed to improve/enhance/redefine the "substance" of the subject matter that is being recited by a given claim using the new subject matter that was added via a subsequently filed CIP specification, e.g. in order to tighten the noose on potential infringers and/or in order to cast a wider net to ensnare new potential infringers, and yet still be entitled to the earlier filing date of a past unincorporated 1981 Parent specification that did not contain this improved/enhanced/redefined subject matter?**

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<sup>37</sup> The examiner maintains that the differences in the respective 1981 and 1987 definitions of "programming":

- 1) represent real differences in the respective "properties" of the different kinds of "signaling" that made up the respective 1987 and 1981 subject matter; and
- 2) are not simply different statements of "*disclosed utilities*" as applicant might try to allege in the future.  
(e.g. once again, the 1987 SPAM-type signaling subject matter that is necessarily being claimed by the pending claims is explicitly inclusive of "computer software/programming" whereas the 1981 signaling subject matter was not).

The short answer to this question seems to be, "NOT". That is, preventing a patent from being expanding in this manner was precisely the reason why the written description requirement of section 112-1 was incorporated into Section 120 in the first place.

**"Unlike the enablement provision of section 112, where the disclosure of a single species might be sufficient to enable a practitioner skilled in the art to make and use any member of the genus,....., the written description requirement of section 112 requires more. See Vas - Cath, supra. This strict reading of the written description requirement prevents an inventor from surreptitiously expanding a patent through successive continuation-in-parts. See id. At 1562. Essentially, it limits the claims of an applicant to those inventions he clearly discloses, either expressly or inherently"** (emphasis added)

[Tronzo v. Biomet Inc. (DC SFla) 41 USPQ2d 1403<sup>38</sup> citing Vas-Cath Inc. v. Mahurkar (CA FC) 19 USPQ2d 1111]

**An adequate written description of the invention "guards against the inventor's overreaching by insisting that he recount his invention in such detail that his future claims can be determined to be encompassed within his original creation."**

[Vas-Cath Inc. V. Mahurkar (CA FC) 19 USPQ2d 1115]

**"In 1967, the Court of Custom and Patent Appeals first separated a new written description (WD) requirement from the enablement requirement of [Section] 112. The reason for this new judge-made doctrine needs some explanation. Every patent system must have some provision to prevent applicants from using the amendment process to update their disclosures (claims or specification) during their pendency before the patent office. Otherwise applicants could add new mater to their disclosures and date them back to their original filing date, thus defeating accurate accounting of the priority of invention."**

[Enzo Biochem Inc. v. Gen-Probe Inc. 63 USPQ2d 1618,1624 (CA FC 2002)]

The point being that applicant had every right to draft a claim based solely on the 1981 subject matter which was described in the context of the 1981 definition of "programming", and to have argued that a fair reading of the 1981 "programming" terminology encompassed "computer programming" transmission too; i.e. wherein such an "argument" would have been necessary in view that the 1981 definition of "programming" did not include "computer programming". Instead, applicant elected to draft a new CIP specification which modified the

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<sup>38</sup> NOTE: this case was appealed [Tronzo v. Biomet (CA FC) 47 USPQ2d 1829]

definition of "programming" to explicitly include "computer programming" thereby eliminating any question that "programming", in the context of the new 1987 CIP, explicitly encompasses "computer programming":

(E.G. *Why do applicants believe that their new 1987 definition of "programming" should be entitled to the 1981 filing date of the old 1981 "programming" definition which it replaced?; Why should applicants' "1987 inventions", which have been described in terms of the new 1987 definition of "programming", be entitled to the 1981 filing date of "past 1981 inventions" which were described in terms of the lesser 1981 definition of "programming?" etc,...*)

13) To try to overcome applied prior art of record, applicants have repeatedly alleged that the Radio and Television broadcast arts constitute non-analogous arts. This position is absurd and wholly unsupportable too.<sup>39</sup> The examiner points out that the Television broadcast art actually evolved from the Radio broadcast art because the original radio broadcast networks represented existing entities who had the program distribution resources and expertise that was easily extended and applied to TV programming; e.g. NBC, CBS, ABC all began as Radio distribution networks which evolved, quite "naturally", into Television broadcast networks too [NOTE: the last 5 lines of the first paragraph of the first column on page 811 of the article "Versatile Transmission Video Facilities at NBC New York" by Mausler which states that: "the origins of television broadcasting practice may be found in radio" (a copy of which was provided within SN 08/470,571)]. In fact, the most significant difference (i.e. if not the only "real" difference) between Radio and Television distribution networks is the difference in bandwidth of the equipment that is required to handle Radio and Television program signal distributions. Thus, for example, when Hetrich [Australian patent #74,619/ U.S. patent #3,866,123] stated that the disclosed "Netcue" system was applicable to either "a network of radio or television stations", one of ordinary skill in the art would have recognized that this teaching was in fact founded on the underlying understanding that Radio and Television network were analogous arts (i.e. applicants' allegations to the contrary are based on an unrealistically low level of skill in the art).

14) Throughout the prosecution of their vast patent application portfolio, applicants have alleged that the "**simultaneous or sequential presentation**" recitation, as found in many of their pending claims, represents a "key limitation" in overcoming and/or avoiding "prior art" of record [note: lines 2-6 on page 17 of Appendix A in the response filed on 3/19/2001 in SN 08/469,078; and part "4)" under "Section VII" of the Office action mailed 8/27/01 in SN 08/470,571]. The

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<sup>39</sup> Note that adequacy of applicants' own disclosures, especially that of the 1981 parent, appear to be based on the fact that one would understand that radio and television systems are in fact analogous (i.e. evident in the 1981 definition of "programming" alone).

examiner strongly disagrees. The examiner points out that the alternative expressions "simultaneous or sequential" or "one of a simultaneous and sequential" simply encompasses ANY AND ALL of the ways by which two types of information could ever be presented to a given audience. Specifically, any time two types of information are presented to a given audience, they must necessarily be presented to that audience either *simultaneously* or *sequentially* in time. The phrase "simultaneous or sequential" simply covers ALL of the possibilities! Thus, if one can show that a given piece of "prior art" operated to present two types of information to a given audience, then one has in fact inherently shown that the prior art meets the "simultaneous or sequential presentation" limitation of applicants' claims; i.e. again, the recitation "simultaneous or sequential" simply covers ALL of the way that two types of data could ever be displayed to a single audience!

15) Applicants have alleged that their past 1981 Parent specification "implicitly" taught the downloading of "computer programming" (i.e. computer software).

**"To the contrary, the 1981 definition [of 'programming'] implicitly includes, and the 1987 definition [of 'programming'] explicitly includes, computer programming in the definition".**

**"The 1981 specification states:**

**It is the object of this Invention to unlock this potential by the development of means and methods which permit programming to communicate with equipment that is external to television receivers and radio receivers, particularly computers and computer peripherals such as printers**

**1981 Spec., Col. 1, II.36-41**

**Thus applicants' 1981 specification makes it clear that 'programming' is not just TV and Radio shows- It can also include Instructions, codes, and signals that are communicated to and control e.g., computers and computer peripherals. These Instructions, codes, and signals clearly fall within the definition of programming and to find otherwise is to conveniently and purposefully overlook the entire purpose of the Invention.** (emphasis added)

[Page 150 of the amendment filed 1/28/2002 in 08/470,571]

The examiner strongly disagrees for reasons that were addressed in Appendix IV of this Office action.

16) Applicants failed to carry their original 1981 specification forward into the instant 1987 disclosure.<sup>40</sup> Because of this, applicants have forfeited their right to now claim any of the 1981 subject matter that was set forth in this 1981 disclosure of their originally filed 1981 parent application, but was not carried forward into the 1987 CIP disclosure of their originally filed 1987 parent application.<sup>41</sup> Thus, APPLICANTS ARE CLEARLY WRONG when they alleges that he can secure a 1981 priority date for that which is now claimed by showing "possession" of that which is now claimed via the original disclosure of their 1981 parent application alone (i.e. NOT for the 1981 subject matter that was left behind at the time of filing of the 1987 CIP!). Specifically, not only must applicants show that they possessed the subject matter that is now claimed with respect to the original 1981 disclosure but, more importantly<sup>42</sup>, applicants must first show possession of the same claimed subject matter with respect to the instant 1987 disclosure alone. Stated another way, to secure priority, applicants must be able to show that they did not forfeit their right to claim the subject matter possessed (i.e. *described*) in his originally filed 1981 parent application by showing, *independently*<sup>43</sup>, that they possessed (i.e. *described*) this same subject matter at the time they filed the instant 1987 CIP specification too; i.e. that a description of this same subject matter had in fact been carried forward.

17) Applicants are only entitled to claim subject matter that was set forth within the originally filed 1987 CIP disclosure of their present application in accordance with ALL of the requirements of section 112-1. Specifically, the examiner refutes applicants' allegations that the original disclosure of his 1981 parent application can be used in place of the instant 1987 disclosure to meet one or more of the section 112-1 requirements (namely, to establish "possession" of that which is now claimed). It is only after proper section 112 support (i.e. including

<sup>40</sup> The examiner notes that applicant failed to incorporate the original disclosure from his 1981 parent application into the original disclosure of his 1987 parent; i.e. the 1981 disclosure was neither formally copied into the 1987 disclosure nor was the 1981 disclosure "incorporated by reference" into the 1987 disclosure. The original 1987 disclosure simply replaced the 1981 disclosure as "THE INSTANT DISCLOSURE" from which all section 112 issues must be analyzed.

<sup>41</sup> As evidenced by arguments before the ITC (investigation #337-TA-392), even applicant and/or his counsel seemed unsure as to exactly what subject matter from applicants' 1981 parent ("if any") made it into applicants' 1987 disclosure.

<sup>42</sup> "More important" in the sense that applicants are prohibited from now claiming anything that is not fully supported in accordance with all of the requirements of section 112-1 by the present disclosure (e.g. the disclosure that was originally filed by applicant in 1987). Specifically, the present claims fall under section 112-1 if they are not fully supported by the present 1987 disclosure even if they were, by some chance, fully supported by the disclosure of the earlier 1981 parent.

<sup>43</sup> If applicants had formally/properly incorporated the written description from his 1981 parent application into his originally filed 1987 disclosure, then there would be no need for these "independent" showings; i.e. applicants could have established "possession" via the originally filed disclosure of their 1981 application alone. It is only because applicants failed to formally/properly incorporate the written description from his 1981 parent into their originally filed 1987 disclosure, that such "independent" showings of "possession" are needed; i.e. because the actions taken by applicants have in fact caused the forfeiture of their right to now claim that subject matter from their 1981 disclosure which was not carried forward into the 1987 application.

"possession") has first been established for the pending claims from the disclosure of the present application (the 1987 disclosure), that there is even a need to consider applicants' 1981 parent application at all. Simply put, if the pending claims are not supported under section 112-1 by applicants present disclosure as originally filed, then the pending claims themselves fail to comply with the requirements of section 112-1 and no further questions need be asked.<sup>44</sup>

18) As was noted above, applicants do not believe that "common subject matter" is a requirement for priority under section 120.

**"[Section] 120 does not require an applicant to demonstrate that the disclosures relied upon under §120 have anything in common besides their ability to separately comply with §112-1 with respect to the claims for which priority is sought. Accordingly, the Examiner's focus on comparing the support from the two applications for similarity or common subject matter is improper and irrelevant because all applicants are required to do is satisfy §120 is show that each disclosure meets the requirements of §112-1 for a given claim." (emphasis added)**

[Page 141 of applicants' response filed on 1/28/2002 in application S.N. 08/470,571]

**"Accordingly, the law requires a two part test in which the applicant separately demonstrates § 112 support for each application. In the FOA, the examiner distorts this straightforward test by imposing a third element of the test whereby the § 112 support from each application consists of 'common subject matter.'"**

[see the last 10 lines on page 137 of the response filed on 1/28/2002 in SN 08/470,571].

Being such, applicants do not even pretend/contend that the subject matter that is now being claimed in his many applications represents "common subject matter" that exists between the instant 1987 CIP specification and the past 1981 parent specification. Instead, applicants are content to allege the benefit of section 120 priority for that which is claimed based only on alleged "correlated subject matter" between his 1987 and 1981 specifications; e.g. NOTE:

- a) That Appendix C of applicants' response filed 6/7/2000 in 08/470,571 sets forth alleged "correlations" between respective 1981 and 1987 disclosures; and
- b) That the claim by claim showing of alleged 1981 and 1987 section 112 claim support in Appendix A of applicants' response filed 6/7/2000 seem to regurgitate many of the alleged "correlations".

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<sup>44</sup> At least with respect to the issue of "adequate written description".

The examiner, on the other hand, maintains that "common subject matter" is a requirement of section 120. Thus, the examiner maintains that applicants' allegations pertaining to the existence of "correlated subject matter" are irrelevant to the issue of section 120 priority because "common subject matter", not "correlated subject matter", is required under section 120. As noted above, it appears that applicants have confused the "anticipation" requirement of section 102 with the adequate written description requirement of section 112-1; wherein it is the requirements of section 112-1, and not of section 102, that have been literally incorporated into section 120.

An extreme example of just how far applicants have distorted section 120 in an effort to obtain the 1981 priority date for ones of the pending amended claims can be found in the claim chart for claim 123 within APPENDIX A of applicants' response filed 6/7/2000 in SN 08/470,571. In this claim chart, applicant alleges that the recitations of claim 123 find section 112-1 support via the "Super Discount Supermarkets" embodiment of the instant 1987 CIP disclosure while alleging that this claimed 1987 "Super Discount Supermarkets" embodiment is entitled to the 1981 filing date of the parent application based on the 1981 "Wall Street Week" embodiment. The examiner disagrees. Specifically, the examiner maintains that the 1987 "Super Discount Supermarkets" embodiment and the 1981 "Wall Street Week" embodiment do not constitute "common subject matter" and therefore the claimed 1987 "Super Discount Supermarkets" embodiment is not entitled to the 1981 filing date of the 1981 "Wall Street Week" embodiment as alleged.

19) In lines 3-7 on page 11 of the supplemental response filed 5/06/2002 in SN 08/470,571, applicants state:

**"[T]he starting point for determining whether an applicant is entitled to priority under section 120 is what is being claimed. Without identifying precisely what is being claimed, it is impossible to seriously undertake an analysis of whether sufficient support exists in both applications thus entitling applicants to a 1981 priority date."** <sup>45</sup>

The examiner agrees. However, the examiner is surprised that applicants raise this issue after all of the section 112-1 requests which have been made by the Office throughout the present prosecution of applicants 328 bulk filed applications in hopes of getting applicants' clarification as to *precisely what it is* that applicants are now claiming. In fact, the Office has continued to struggle in its efforts to make such determinations for the 10,000 or so pending/amended

<sup>45</sup> The examiner agrees with applicants' position noting that, without being able to identify precisely what it is that is being claimed, it is impossible to seriously undertake many other examining related activities too .

claims that exist before it. In the past, when applicants were asked to identify "*precisely what is being claimed*", applicant declined<sup>46</sup> to provide such showings instead opting to take the positions:

- A) That it is the examiners job, not applicants', to read and understand the 557 pages of applicants' current 1987 CIP specification in order to determine "precisely what it is being claimed" via applicants' 10,000 or so pending claims; and
- B) That at least some of the limitations of applicants' 10,000 or so pending claims may be directed to subject matter that is not described within in the instant 1987 CIP specification.

**"the [examiner's] assumption that 'all limitations of the currently pending claims are necessarily directed to that which is described in the present 1987 disclosure' is mistaken and wholly unsupported."**<sup>47</sup>

[lines 8-10 on page 144 of the amendment filed in 08/470,571 on 1/28/2002].

Hence applicant does not wish to cite, or perhaps is unable to cite, section 112-1 support from the instant CIP disclosure for the claim limitations [e.g. in at least one instance, out of an expressed a fear that a court, at some later date, might actually hold the scope/meaning of his claims' limitations to the so identified subject matter].

In regard to this section 112-1 issue raised by applicants' argument, the examiner continues to take the following positions:

- A) It has always been a desire of the examiner/PTO to determine "precisely what it is" that applicants now claim. Being that it remains unclear as to "precisely what it is" that applicants now claims, clarification on the part of applicants is once again formally requested for all of the 10,000 or so pending/amended claims. For the record, the examiner notes that he has found applicants' claim charts of alleged "dual" section 112-1 support to be the most helpful form of aid that applicant has provided to date because it at least attempts to match each claimed

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<sup>46</sup> A notable exception being the most helpful claim charts of alleged "dual" section 112 support which applicant has, only on a few occasions, been willing to kindly provide [e.g. APPENDIX A in the amendment filed 6/7/2000 in 08/470,571].

<sup>47</sup> Contrary to applicants' position, the examiner maintains that a pending claim must necessarily be directed to, and supported by, that which is described in the instant 1987 specification. This is not to say that the resulting scope of the pending claims is limited only to that of the 1987 specification to which it must necessarily be directed.

limitation to the specific teachings in the specification(s) that they are allegedly directed; <sup>48</sup> and

B) The examiner adopts observations/positions expressed by Judge Luckern and/or the ITC:

- 1) "that the specification of the '277 patent [the 557 pages of the Instant 1987 specification] is difficult to understand, as it is dealing with many possible systems";**
- 2) "that despite complainant's [i.e. the current applicants] attempts to point to the specification of the '277 patent [the 557 pages of the Instant 1987 specification] as illustrative of some claim elements, said specification has not been helpful in connecting individual claim language to distinct statements in the specification of the '277 patent that is supposed to provide an explanation of the claimed systems in issue";**
- 3) "that complainant's [i.e. the current applicants] assertions in many instances of where support in the specification of the '277 patent [the 557 pages of the Instant 1987 specification] can be found for claimed elements 'reads like the directions to a treasure hunt. There's a piece here, there's a piece there, it's in there somewhere.'"; and**
- 4) " that the specification of the '277 patent [the 557 pages of the Instant 1987 specification] and the claims in issue 'are like ships passing in the night in the same ocean, but not necessarily sailing in the same direction."**  
**[SEE: 1997 ITC Lexis 307, \*258 (part I of II)]**

Once again, the examiner hereby requests applicants' help in determining "precisely what it is" that applicants now claims.

20) The examiner notes that the "SPAM" technology, on which the "more sophisticated" systems of applicants' present 1987 disclosure are based, is vastly different from the "cuing-type signal" technology on which the "primitive" systems of applicants' 1981 parent application were based; e.g. the ability of SPAM to carry and distribute "software" being but just one of the more notable differences. Clearly, the "more sophisticated" 1987 alleged inventions and

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<sup>48</sup> The process of showing a limitation-to-disclosure match for each limitation of each claim should be an easy task for applicant, if not a trivial one, being that the currently pending claims must be "*clearly/unambiguously described*" by applicant's instant disclosure.

signaling that are now necessarily being claimed are not entitled to the 1981 filing date of their 1981 "primitive" ancestors; i.e. applicants are not allowed to transport their "more sophisticated" 1987 alleged inventions back in time to the 1981 filing date of his different, albeit sometimes "correlated", "primitive" 1981 alleged inventions. Only claims which recite "common subject matter", subject matter that can be identified by applicants within both specifications, is entitled to the 1981 effective filing date.

- 21) Judge Rich has taken the position that "continuity of disclosure", needed to establish the benefit of priority under section 120, requires continuity of "common subject matter" in a form that meets all of the requirements of section 112-1; e.g. even continuity of "best mode".

**"It must be understood that the introduction of a new best mode disclosure would constitute the injection of 'new matter' into the application and automatically deprive the applicant of the benefit of the earlier filing date of the parent or original application for any claim whose validity rests on the new best mode disclosure".**

TRANSO [38 F.3d 551; 32 U.S.P.Q.2D (BNA) 1077]

This Judge's position is NOT consistent with applicants' position that section 120 does not require "common subject matter" between applications; further evidencing the fact that applicants seem to have confused the issue of "anticipation" under section 102 which the requirements of section 112-1 that have been incorporated into section 120.

**[The "best mode" issue under section 120 has been raised by the examiner only to show a further inconsistency that exists between applicants' position concerning the requirements of section 120 priority, and positions that have been held by the courts. The examiner has not, and never intends, to make a rejection under "best mode". In fact, it is the examiner's belief that the "best mode" was disclosed by applicants in each of their 1981 and 1987 disclosures. The problem is that the "best mode" of the 1987 disclosure may differ from the best mode of the 1981 disclosure (e.g. 1987 SPAM signaling v. 1981 trigger signals). To the extent that this is true, if at all, as noted by Judge Rich such alone is enough to deprive applicants' current claims of the 1981 priority date; i.e. again, further refuting the "anticipation" standard of claim that continues to be argued by applicants (see appendix I of this Office action)].**

- 22) It is understood that CIP practice, when properly utilized, allows an applicant to file a new application containing additional/new subject matter while preserving the applicants' right to claim (and the right to the earlier filing date for) subject matter which was previously disclosed in the parent application. But an applicants' right to claim subject matter from the parent application is only preserved for that subject matter of the parent application that has actually been

carried forward (e.g. *incorporated*) into the disclosure of the CIP. Any and all subject matter from the parent application that is not carried forward into the disclosure of the CIP cannot be legally claimed within said CIP; i.e. the right to claim subject matter that is left behind is lost/forfeited with respect to said CIP application. To prevent such a loss/forfeiture, it is customary for an applicant to draft the disclosure of his CIP application in a manner that it literally incorporates the entire disclosure of the parent application, e.g. either physically or "by reference", thereby literally carrying forward all of the subject matter from the parent application into the CIP application and, in doing so,:

- A) Preserving applicants' right to claim any/all of the subject matter from the parent within said CIP application; and
- B) Preserving applicants' right to the filing date of the parent application for any/all claims that are directed to the subject matter of the parent application that has been carried forward into the CIP application.

In contrast to the customary CIP practice described above, when filing their 1987 CIP disclosure, the present applicants elected to draft an entirely new 1987 specification and elected not to formally incorporate the 1981 disclosure from their 1981 parent application in its entirety. In fact, when filing their 1987 CIP disclosure, applicants elected to draft the entirely new specification in a way which makes it difficult to impossible to determine what, if any, of the subject matter from the 1981 parent specification was carried forward into the disclosure of the 1987 CIP<sup>49</sup>. Today, faced with the fact that 1981 subject matter which was not carried forward (i.e. *incorporated*) into the present disclosure has been lost/forfeited, applicants takes a leap of faith and suggest that all of the subject matter from their 1981 parent application somehow/miraculously found its way into the new disclosure of the 1987 CIP. Clearly, this does not appear to be true. For example, even the subject matter from the two disclosures which looks similar at first glance, is based on vastly different transmission technologies, vastly different terminology/definitions, etc..... [e.g. note Appendix I and Appendix III of this Office action].

**23)** The examiner notes that many of applicants' pending claims recite the following receiving station structures: a) a receiver; b) a signal detector; c) a processor; and d) an output device. Appendix A of the response filed on 6/7/2000 in SN 08/470,571 shows that:

- a) The recited "receiver" refers to nothing more than --a TV tuner--;

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<sup>49</sup> For example, to the extent that the 1987 CIP has injected a "new best mode disclosure" by literally replacing the 1981 inventions with new 1987 inventions which are based on a more sophisticated technology (i.e. SPAM), applicants' claim to priority of the 1981 filing date is refuted (i.e. in the words of Judge Rich).

- b) The recited "signal detector" refers to nothing more than a decoder 203 which extracts and error corrects embedded information from the VBI of TV programming;
- c) The recited "processor" refers to nothing more than microcomputer 205; and
- d) The recited "output device" refers to nothing more than a "TV monitor".

The examiner maintains that all of these recited structures are found within a conventional CPU/MP/computer implemented Teletext receivers. For example, note:

- a) The TV tuning element (2);
- b) The extracting and decoding circuitry 8 and 11;
- c) The processing element (13); and
- d) The TV monitor/display (6), of BETTS [GB 1,556,366].

Such further highlights the direct correlation that exists between the "SPAM" distribution system of applicants' alleged invention and the "Teletext" distribution systems of the "prior art". Again, the examiner believes that applicants' "SPAM" is, for all intents and purposes, synonymous with conventional "Extended Teletext" [note part "5" of this appendix];

**24)** Applicants' originally filed instant disclosure clearly taught away from the "interactive" ultimate receiver station configuration that has been claimed during the present prosecution [note claim 56 as presented in the amendment filed 6/7/2000 and 7/13/2000 in 08/470,571]. Namely, as originally described, one of the key advantages that was allegedly offered by applicants' alleged inventions was the fact that the "ultimate receiver stations" produced their respective personalized audio/video presentation "automatically" and without any manual input from the viewer; e.g. whereby the complex processing that was involved within the system remained hidden from, and transparent to, the viewer/user.  
SEE:

- A) Lines 27-34 on page 11 of applicants' instant disclosure as originally filed;
- B) Lines 18-20 on page 91 of applicants' instant disclosure as originally filed;

C) Lines 13-34 on page 427 of applicants' instant disclosure as originally filed;

D) etc,...

Despite this original teaching, applicants have attempted to introduce pending amended claims into the record that, according to applicants' own allegation (see the support for claim 56 as was set forth in APPENDIX A of the amendment filed on 6/7/2000 in SN 08/470,571), recite an "interactive" implementation of the originally disclosed non-interactive "ultimate receiver stations". The section 112-1 problem is immediately apparent [this issue has been addressed in detail in sections II and VI of the Office action mailed 7/17/2002 in SN 08/470,571].

25) As originally described, it appears that the "ultimate receiver stations" of applicants' alleged invention produced the combined image of applicants' figure 1C by (apparently) additively mixing the images of figures 1A and 1B in their entirety; i.e. this fact seems to explain why the "line" of figure 1A had to be produced "on a background color that is transparent when overlaid on a separate video image" as was described in applicants' originally filed disclosure [see lines 9-14 on page 25 of applicants' instant disclosure]. Despite this original teaching, applicant has attempted to introduce claims which explicitly recite processes in which the respective images are combined in less than their entirety and/or in which one portion of one image is "replaced" by a portion of another (i.e. known in the art as "keying" or "non-additive mixing"). The section 112-1 problem is immediately apparent [this issue has been addressed in detail in section VI of the Office action mailed 7/17/2002 in SN 08/470,571].

26) In the first two lines under the heading "*a. Independent Claim 56 and Dependent Claims Thereto*" on page 287 of the response filed 1/28/2002 in SN 08/470,571, applicants allege that the publication date of the applied Gunn et al article was never established by the Office. This allegation is untrue. The following is noted:

- a) This Gunn et al. article was originally submitted by applicants for consideration within voluminous IDS citations. However, as with many of these citations, applicants never provided the Office with information regarding the publication date of the article;
- b) The Gunn et al. article has been applied by the Office against many of applicants' pending claims, and while applicant never provided the Office with the article's publication date, using a commercial database the Office was able to establish the date in question and notified applicant of it

accordingly [note: the PTO- 892 of paper #2 in the present 08/470,571 record; the PTO-892 of paper #20 in SN 08/447,502; etc,...];

c) Again, the publication date for this Gunn et al. article, e.g. an article that was submitted by applicant for consideration against the pending amended claims, is March 26-28 of 1980. This date is, by any standard, valid "prior art" against all of applicants' pending claims.

27) In the first four lines on page 15 of the supplemental response filed 5/6/2002 in 08/470,571, applicants state:

**"applicants further questioned [the examiner as to] why it would be necessary to incorporate the parent disclosure, by reference or in full-text format, if the subject matter of the parent application is properly disclosed in the CIP application in an integrated manner with the enhancements and improvements of the CIP application."** (emphasis added)

That depends on what applicants mean by "*properly disclosed*." According to applicants, "*properly disclosed*" does not require that the claims be supported by "common subject matter" found in both applications.

**"[Section] 120 does not require an applicant to demonstrate that the disclosures relied upon under §120 have anything in common besides their ability to separately comply with §112-1 with respect to the claims for which priority is sought. Accordingly, the Examiner's focus on comparing the support from the two applications for similarity or common subject matter is improper and irrelevant because all applicants are required to do is satisfy §120 is show that each disclosure meets the requirements of §112-1 for a given claim."** (emphasis added)

[Page 141 of applicant's response filed on 1/28/2002 in application S.N. 08/470,571]

In contrast, the examiner maintains that "*properly disclosed*" requires continuity of "common subject matter" between applications for that which is claimed. Being such, if there is any way by which current applicant can use the section 112-1 support that is actually available in the instant 1987 CIP disclosure to "properly" show that the currently pending claims are in fact directed "solely" to 1981 subject matter previously described in the past 1981 Parent specification, i.e. "common subject matter", then section 120 priority would be a "*given*". To date, applicant has been unable to provide such a showing.<sup>50</sup>

<sup>50</sup> This is not a situation in which the "wording" that was used to described "common subject matter" has simply been changed between applications as applicant would now try to have one believe [note lines 7-11 on page 15 of the supplemental response filed in 08/470,571 on 5/6/02]. Instead, it is a situation in which "1981 inventions" from the 1981 specification were left

Here, it is important to note that a direct path to such a "proper" showing would have been available to the current applicants had the *unenhanced/unimproved* subject matter from the past 1981 specification *actually* been incorporated into the instant specification in a distinct and discernible fashion. This is, in essence, the answer to the question that has been asked by applicants.

**"applicants further questioned why it would be necessary to incorporate the parent disclosure, by reference or in full-text format"**

[the first four lines on page 15 of the supplemental response filed 5/6/2002 in 08/470,571]

Specifically, any applicant wishing to draft a claim in a later filed CIP application that is going to be directed *solely* to "subject matter" found in an earlier filed Parent application, e.g. thereby allowing the drafted claim to obtain the benefit of section 120 priority, would be wise to incorporate said "subject matter" from the parent application into the CIP specification in a clear and undisputable fashion. Incorporating the Parent specification by reference, or by literally carrying it forward in a substantially identical "full-text format", are methods that are commonly used by applicants for this purpose. And, for obvious reasons, the need to "incorporate" the parent's subject matter in a clear and undisputable fashion seems especially true/"necessary" if the "subject matter" of the past parent disclosure is going to be extensively "re-worded", "enhanced", "improved" and "scattered" throughout vast quantities of new subject matter during its alleged migration to the specification of a subsequently filed CIP specification.

28) Section 112-1 requires the written description to provide a description of that which is claimed. For the reasons addressed herein (e.g. the noted inconsistencies between the 1981 and the 1981 specifications), that which is described in the 557 pages of the instant 1987 CIP disclosure is very different from that which was previously described in the 44 pages of the 1981 parent. For example, the "systems and methods" that are described in the 1987 disclosure all utilize a new, more advanced, "SPAM" transmission technology which enables the 1987 systems and methods to carry a wider/broader range of control and instruct signaling (i.e. such as "software") and which also enables the 1987 systems and methods to be applied to a much wider/broader range of communication environments (i.e. the 1987 systems and methods, as described, explicitly encompass application outside the radio/TV environments explicitly described for the 1981 systems and methods):

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behind at the time of filing the instant 1987 CIP specification in favor of the enhanced/improved/expanded "1987 inventions" which are actually described within the instant 1987 CIP disclosure; a fact that is clearly self-evident whenever applicant attempts to specifically demonstrate "dual" 1987 and 1981 section 112-1 for that which is claimed [e.g. as is exemplified via Appendix A of the amendment filed 6/7/2000 in 08/470,571].

**"A continuation-in-part application is not entitled to the benefit of the earlier filing date of its parent application where the changes included within subsequent applications are 'new matter' which either alters the substance of the invention or makes the composition an invention for the first time, as opposed to the situation in which the subsequent application merely contains either a language change not effecting the meaning of the prior application or a specification which narrows the scope of that which was previously claimed. [Indiana General Corp. v. Krystinel Corp., 161 USPQ 82, 94-95]**

And, because the disclosure of the 1981 was left behind by applicant's during the drafting of the 1987 CIP, it is the written description of the 1987 CIP systems and methods alone which must provide the description of the systems and methods that are now being claimed as required under section 112-1; i.e. that which is claimed necessarily being the much improved/enhanced/expanded systems/methods of the 1987 CIP specification. Why should/would these described/claimed enhanced/improved 1987 CIP systems and methods be entitled to the 1981 filing date of the lesser 1981 systems and methods that were previously described in the 1981 parent specification that was literally left behind (abandoned) during the drafting of the instant 1987 CIP specification? By abandoning the 1981 specification (leaving it behind during the drafting of the 1987 CIP), it is difficult if not impossible for applicants to alleged that that which is now claimed is directed solely to the systems and methods that were previously described in the abandoned specification of the 1981 parent (i.e. that the current claims are directed to "common subject matter").

The current fact pattern seems akin to situations in which a courts have held that an applicant was not entitled to "priority" based on the applicant's foreign filed application because said foreign filed application did not describe "the same invention" yet, at the same time, affirming a rejection of "anticipation" under section 102 of the same claims based on the same foreign filed application [e.g. *In re van Langenhoven*, CCPA 173 USPQ 426]. That is, such case law underscores the fact that there is a very "real" difference between the requirements of 112-1 that must be met for establishing "priority" to an earlier filed application and the requirement of section 102 needed for establishing "anticipation". Namely, the fact that the current applicants' claims might be shown to be "anticipated" by different subject matter from applicants' 1987 CIP and 1981 specifications using the standard of "anticipation" provided for under section 102, is insufficient (even if true) to establish priority under section 120 unless that which is described in the respective 1981 and 1987 CIP disclosures can be shown to be "the same"/"common subject matter".

**29) Applicants take the position that they are allowed to use the "new subject matter" that is contained only within the instant 1987 CIP specification to fulfil the**

section 112-1 requirement for their pending claims and yet still obtain the earlier 1981 filing date of the 1981 Parent specification for these claims by alleging that some underlying principle or teaching from the 1981 specification is buried/embedded/hidden somewhere within the cited "new subject matter".

**"The fact that the [section 112-1] support [that applicant] identified in the 1987 specification for a certain [claimed] features (or limitation) also happens to include additional features or details relating to the same underlying feature (or limitation) disclosed in the 1981 specification , does not mean that both specifications do not support the feature or limitation with similar and valid 'common subject matter' support."<sup>51</sup>**

[lines 5-8 on page 10 of the supplemental response]

Here, applicants seem to suggest that it is "solely" the alleged "underlying features" from the 1981 disclosure that are being claimed by the pending claims' recited limitations, even though the passages from the instant 1987 specification that must be cited by applicant, for the expressed purpose of providing the required section 112-1 support for the claims' limitations, necessarily comprise new/added 1987 subject matter that was introduced via the filing of the 1987 CIP specification. Apparently, it is applicants' position that the added/new 1987 subject matter contained within applicants' own citations of alleged section 112-1 support should be weeded out, discarded and/or ignored under section 120 in order to allow the alleged underlying principles, ones that were allegedly carried forward from the past 1981 parent specification, to emerge therefrom (thereby allowing applicants' subsequently filed CIP claims to obtain the earlier 1981 filing date of the parent application).

That is, applicants' position seems to suggest that it is proper for a claim to have two different claim constructions: i.e. A first all encompassing claim "construction" that is obtained when the claim is constructed/construed based on a full reading of the instant 1987 CIP specification; and, A second claim "construction" that is obtained when the claim is constructed/construed in light of different and lesser teachings of the discarded 1981 parent specification. The examiner thinks not.

30) In lines 16-19 on page 15 of the supplemental amendment filed 5/6/2002 in 08/470,571, applicant alleges:

**"that incorporating the parent [specification], either by reference or in full-text format, into a CIP application that disclosed the subject matter**

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<sup>51</sup> The examiner notes that the fact applicant is relying on the new "enhanced/improved" subject from his 1987 CIP to provide section 112-1 support for the claim is self-evident whenever applicant attempts to specifically show the alleged "dual" section 112-1 support for a given claim's limitations via the different specifications [e.g. as is exemplified via Appendix A of the amendment filed 6/7/2000 in 08/470,571]

**of the parent in an Integrated fashion does nothing more than add unnecessary duplicative content to the CIP application."**

The examiner notes the following:

- 1) If applicant is suggesting that this is the situation that currently exists between his instant 1987 CIP specification and his past 1981 Parent specification, then the examiner suggests that applicant make the attempt to formally incorporate his past 1981 parent specification into his current 1987 CIP specification either by reference or in said full-text format in order to resolve the priority issue once and for all. Applicant is, however, put on notice that any attempt to amend the instant 1987 CIP specification in such a fashion will be vigorously objected to as introducing "NEW MATTER"; and
- 2) Given the present situation, having added a single sentence to the 557 pages of text that comprise the 1987 CIP specification, stating that the 44 page specification of the past 1981 Parent application had been "Incorporated by Reference", hardly seems to fall within the realm of "add[ing] unnecessary duplicative content to the CIP application."

**31)** In lines 19-22 on page 15 of the supplemental amendment filed 5/6/2002 in 08/470,571, applicants allege:

**"applicants' have established in their prior submissions that all of the fundamental teachings of the 1981 disclosure were carried forward to the CIP application, albeit in an integrated fashion with many enhancements and improvements of the CIP application."**

The current examiner knows of no prior submission or submissions made by applicants which has "established", as fact, that *that* which is now claimed by applicants' currently pending amended claims is directed "solely" to "fundamental teachings" from applicants' past 1981 Parent disclosure which have been carried forward to the instant 1987 CIP specification. In fact, attempts made by applicant to specifically identify the required section 112-1 support for the limitations of currently pending amended claims have instead "established", as fact, that *that* which is now claimed actually comprises ones the "many enhancements and improvements of the CIP application" that are not entitled to "priority" under section 120.

32) In lines 9-12 on page 10 of the supplemental response filed 5/06/2002 in SN 08/470,571, applicants' state:

**"The mere presence of the additional details and enhancement in the 1987 specification does not deprive applicants' of the 1981 priority date unless the claim limitation or feature is only supported by such additional details and enhancements which are not found in the 1981 specification."**

*See Kennecot, 835 F.2d at 1422." (Emphasis added)*

[Lines 9-12 on page 10 of applicant's supplemental response filed 5/6/02]

It is not clear how the cited case law, e.g. *Kennecot*, 835 F.2d at 1422, supports applicants' apparent position that a claim in a continuation-in-part application is entitled to the earlier filing date of a past parent application if only part of its required section 112-1 support comes from "new CIP subject matter" that was introduced via the filing of a CIP specification. This again suggests a situation in which a given claim has two claim construction and two effective filing dates, whereby an examiner could/should reject that portion of a pending claim's scope which is allegedly supported by the "New Matter" of a CIP via valid intervening "prior art" while, at the same time, allowing that portion of the same pending claim's "scope" that is directed "solely" to the subject matter of the Parent application to issue as a patent. Such a position does not make sense.

To the contrary, by claiming the benefit of section 120 priority for a given claim filed in a subsequently filed CIP application, an applicant is in essence "*pledging*" (e.g. putting everyone on notice) that the claim is directed "solely" to subject matter found within the specification of the Parent application, and not to "new subject matter" that has been introduced via the subsequently filed CIP; i.e. that the respective descriptions being relied upon for section 112 support under section 120 are in fact legal equivalents.<sup>52</sup>

However, such a "pledge" must be supported by the CIP specification from which the claim depends. Namely, if a claim in a CIP application is going to be directed "solely" to the subject matter of a past parent application, then said subject matter of the past parent application must exist within said CIP specification being that the required section 112-1 support for the claim must necessarily come from the instant CIP disclosure. Thus, the subject matter of the parent that one wishes to claim must be carried forward from the parent specification into the CIP specification; i.e. hence the requirement of "common subject matter". However, given the current state of applicants' instant 1987 CIP specification,

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<sup>52</sup> That is, to determine what is being claimed, one turns to that which was "described" in CIP application. If that which is described in the CIP was in fact described in the parent application too (i.e. *common subject matter*), priority under section 120 is established.

e.g. one in which past 1981 subject matter has been (at best) inseparably blended/expanded with subsequently added new 1987 subject matter, it is difficult to determine what part of the past 1981 subject matter, if any, has been carried forward into the instant CIP disclosure. It is improper for one to simply allege/assert that the currently pending claim is somehow more limited than the 1987 CIP disclosure from which it depends (i.e. from which section 112-1 support is derived).

**"The fact that the [section 112-1] support [that applicant] identified in the 1987 specification for a certain [claimed] features (or limitation) also happens to include additional features or details relating to the same underlying feature (or limitation) disclosed in the 1981 specification, does not mean that both specifications do not support the feature or limitation with similar and valid 'common subject matter support.'**

[lines 5-8 on page 10 of the supplemental response]

Again, why should a pending claim having limitations that are necessarily directed to (supported under section 112-1 by) even a smudge of new 1987 subject matter be entitled to the earlier 1981 filing date of the Parent specification which did not disclose that smudge of new 1987 subject matter?

**"However, as mentioned earlier, a continuing application is entitled to rely on the earlier filing date of an earlier application only with respect to subject matter common to both applications" (emphasis added)**  
[In *Transco Products, Inc., v. Performance Contracting, Inc.*, 32 USPQ2d 1077 (\*\*18)]

**"Any claim in a continuation-in-part application that is directed solely to subject matter adequately disclosed under 35 U.S.C. 112 in the parent application is entitled to the filing date of the parent application."**  
[In *Transco Products, Inc., v. Performance Contracting, Inc.*, 32 USPQ2d 1077 (\*\*18)]

**"A continuation-in-part application is not entitled to the benefit of the earlier filing date of its parent application where the changes included within subsequent applications are 'new matter' which either alters the substance of the invention or makes the composition an invention for the first time, as opposed to the situation in which the subsequent application merely contains either a language change not effecting the meaning of the prior application or a specification which narrows the scope of that which was previously claimed. [Indiana General Corp. v. Krystinel Corp., 161 USPQ 82, 94-95]**

**33)** Applicants have suggested that the notoriously well known "mixed" display mode of the videotext prior art pertains only to the display of broadcasted teletext data, and not to the display of telephone supplied Viewdata [e.g. note lines 4-23 on page 105 of the response filed 1/9/2003 in 08/470,571]. Applicants' position is erroneous. In this regard, the following "prior art" has been cited/noted:

- Lines 19-23 on page 2, lines 1-3 on page 12, and lines 1-4 on page 11 of the translation of JP 55-045248 to Tsuboka et al.;
  - Lines 38-53 in column 2 and lines 40-45 in column 4 of U.S. Patent #4,233,628 to Ciciora; and
  - Figures 1 and 4 and the last 3 lines on page 356 of the 1979 IEEE publication entitled "Telex/Viewdata LSI" by Harden.
- .....

**x**

**APPENDIX VII:** ["standardized" Teletext (exemplified)]

3/26/81

Attachment C

UK TELETEXT SYSTEM

525 LINE 60 FIELD SYSTEMS APPLICATIONS

The characteristics of broadcast signals according to the UK Teletext System are defined in the form of a set of decoder response levels. Some features are common to all levels and other features apply optionally.

Decoders responding at level 1 provide a set of 96 alphanumeric characters and two sets of mosaic graphic characters, these latter including 32 alphanumeric characters. A full range of serial display attributes, that include seven display colours are available.

Optional features applicable to all levels include the designation of linked pages for automatic storage and a page confidence check. Further optional features are the designation of an initial page to be selected automatically at switch-on and information related to equipment control rather than display. It is envisaged that this data would apply to a Television Network or Channel generally and not only to the teletext service.

Decoders responding at level 2 include the full ISO character repertoire, additional serial and the full range of parallel attributes. Off text area display attributes are defined on a full screen and full row basis. Means are provided to redefine the national option characters in the primary character set on a page or magazine basis. A smoothed mosaic graphics set and a large range of pastel colours are included.

Level 3 introduces Dynamically Redefinable Character Sets (DRCS) and associated redefinable display colours from a very large range. Such down loaded character sets may be used to extend the character sets of level 2 or to display a complete page.

Page addresses are reserved for levels 4 and 5 that employ respectively alphageometric and alphaphotographic coding. These levels will be fully defined when agreement concerning the coding procedures has been achieved.

Page addresses have also been reserved for the transmission of Telesoftware. This concept includes computer programmes and similar data not for direct display.

CONTENTS

<u>Sections</u>		
1. to 10.	Characteristics applicable to all levels.	
11.	Response of decoders at level 1.	
12. & 13	Optional features applicable to all levels.	
14.	Response of decoders at level 2.	
15. & 16	Response of decoders at level 3.	
17.	Response of decoders at level 4.	
18.	Response of decoders at level 5.	
19.	Telesoftware.	

UK TELETEXT SYSTEM  
525 LINE 60 FIELD SYSTEM M APPLICATION  
Characteristics of Broadcast Signals

1. TV Lines Usable as Data Lines	Subject to availability.
1.1. When Multiplexed with a TV Picture Signal	Lines 10 to 16 of both fields.
1.2. When Not Multiplexed With a TV Picture Signal	Any, except field sync and equalising pulse periods. See also Section 13.2.2.
2. Data Identification	Clock Run-in and Framing Code in appropriate time slot, see section 9.
3. Signalling Method	Binary NRZ.
4. Signal Levels 0 level 1 level	Nominal Values currently proposed: Black level +2% $70(+6)\%$ of the difference between black level and peak white level.
5. Bit Rate	Currently proposed value: $364 \times \text{nominal } f_H, 8/5 \times F_{Sc}$ (5.727272 Mbits/s)
6. Data Timing Reference Point	Peak level of penultimate 1 of clock run-in.
7. Spectrum of Data Pulse	Skew symmetrical about $0.5 \times \text{bit rate}$ , substantially zero by 4.2 MHz.
8. Data Line Content	290 bits as 37 bytes of 8 bits each.
9. Synchronism	See figure 1.
9.1. Clock Run-in (bit sync)	Bytes 1 & 2, begins 10101010....even parity.
9.2. Framing Code (byte sync)	Byte 3, 11100100, even parity.
10. Addressing	See figures 1 and 2.
10.1. Packet Numbers in Form X/T/Y For All Data Lines.	Bytes 4 & 5 Hamming protected. <u>2 binary digits</u> for magazine number X <u>1 binary digit</u> for tabulation T, 0 corresponds to left hand side of display and 1 corresponds to right hand side of display. <u>5 binary digits</u> for display row number Y. 256 unique packets available.
10.2. Page Header Data Lines	Packet numbers X/0/0
10.2.1. Page Number	Bytes 6 & 7 Hamming protected, 256 available.
10.2.2. Page Sub-Code	Bytes 8, 9, 10, 11 Hamming protected, 8192 available. Byte 9, bit 8 is control bit C4 and byte 11 bits 6 and 8 are respectively control bits C5 and C6, see Section 11.

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## 11. Response of Decoder at Level 1

### 11.1. Control Bits in Page Header

#### 11.1.1. C4 Erase Page

Decoder responds to:

a) Packet numbers X/0/0 to X/T/23.

See Note below.

b) Pages 00 to 99 coded BCD.

c) 3200 Page Sub-Codes. The four digits of the Page Sub-Code can take values in the ranges 0 to 3, 0 to 9, 0 to 7 and 0 to 9, respectively.

d) optionally packet numbers X/T/27 (and the contents of packet number X/T/24 and X/T/25) and packet number 4/1/30.

#### 11.1.2. C5 News Flash

Active on being set to 1. C4 to C14, bytes 12 and 13 contain C7 to C14 Hamming protected see Section 10.2.2. for C4 to C6.

#### 11.1.3. C6 Sub-Title Page

Always followed by a 16 ms interval before transmission of further data.

#### 11.1.4. C7 Suppress Header

All information to be boxed.

#### 11.1.5. C8 Update Indicator

All information to be boxed.

#### 11.1.6. C9 Interrupted Sequence

Header to be suppressed (display of clock time optional).

#### 11.1.7. C10 Inhibit Display

Following data may be limited to include only the updated part of the page.

#### 11.1.8. C11 Magazine Serial

Associated page is not in numerical order of page sequence.

#### 11.1.9. C12, C13, C14 Basic Character Set Select.

Data not to be displayed

### 11.2. Page Display

#### 11.2.1. Rows Displayed

Magazines transmitted one at a time in sequence.

No response.

#### 11.2.2. Character Spaces in Rows 1 to 23

Up to 24. When tabulation bit (see Section 10) is set to 0 data packets 0 to 23 correspond to the left hand side of display rows 0 to 23. With the bit rate of Section 5, 32 character spaces are included.

When the tabulation bit is set to 1, the data packet number corresponds to the first row number of a group of right hand sides of display rows. With the data rate of Section 5 the right hand sides of four display rows, each including 8 character spaces are carried by 8 packets. In order to preserve the integrity of packets carrying the page header, the right hand sides of rows 0 to 3 have the packet numbers X/1/1 and there is no response to packets numbered X/1/0.

#### 11.2.3. Character Spaces in Page Header, Row 0

40, transmitted in 2 sections, each left to right.

### 11.3. Character Bytes

32, transmitted in 2 sections, each left to right.

7 bits plus odd parity define a display or control character occupying a character space

11.4. Character Sets for Display	a) 94 alphanumeric characters plus SPACE and DELETE, see figure 3. b) 63 contiguous mosaic graphics characters, plus SPACE and 32 alphanumeric characters. c) 63 separated mosaic graphics characters, plus SPACE and 32 alphanumeric characters. See figure 4 for mosaic character set. Selection between a), b) and c) is by means of control characters, see Section 11.5.
11.5. Control Character Set, 'spacing controls' Including Display Attributes	Set of 32 control characters, 5 unallocated for level 1, which affect the display attributes. The receiver defaults to certain attributes at the start of each row. Some control characters have effect immediately, others at the following character-space. Certain control characters have complementary forms. See figure 5.
11.5.1. Foreground Colour	White, yellow, cyan, green, magenta, red or blue. It is invoked by selection of alphanumeric or mosaic display mode, 7 pairs of control characters, see figure 5.
11.5.2. Background Colour of a Character Space - Black Background  New Background	Invoked by the control character 'black background'. This control character causes the foreground colour then obtaining to be adopted as the background colour.
11.5.3. Contiguous Mosaic Graphics	Mosaic blocks adjoin one another.
11.5.4. Separated Mosaic Graphics	Each mosaic block is surrounded by a border of the background colour.
11.5.5. Hold Mosaic	A held mosaic character is displayed in place of a SPACE corresponding to a control character. The held character is defined only during the mosaic mode. It is the most recent character with bit 6 = 1 in its code, providing that there has been no intervening change in alphanumeric/mosaics or normal/double height display modes. It is displayed in the original contiguous or separated mode.
11.5.6. Conceal	Following characters are to be displayed as SPACE until 'revealed' by a decoder or user operation.
11.5.7. Flash	Following characters are to be displayed normally or as SPACE in alternation, under the control of a timing device in the decoder.
11.5.8. Boxing	Part of a page to be inset into the normal television picture. Protection against false operation is provided by double transmission of the control characters, with the effect taking place between them.
11.5.9. Double Height	Characters are to be stretched vertically to occupy in addition the corresponding character space in the display row with the next higher address, that row displays the same background colour as the previous row.

<b>12. Ancillary Text Related Data</b>	<b>Optional Features.</b>
12.1. Linked Pages Related to a Given Page and Intended for Automatic Storage in the Decoder Memory	Data carried by packet X/0/27 See figure 2.
12.1.1. Clock Run-in, Framing Code and Packet Address	Bytes 1 to 5 inclusive as Sections 9 and 10.
12.1.2. Designation Code	Byte 6, 4 bits data plus 4 bits Hamming protection Codes 0000 to 0011 designate linked page function and are used repetitively as sequence labels for a number of packets X/0/27. There is no response to other codes.
12.1.3. Linked Page Addresses	Bytes 7 to 36 used as 5 groups of 6 bytes. Each group of 6 bytes defines a linked page address.
12.1.3.1. Data Group Format Defining a Linked Page	6 bytes, see figure 2 for bit sequence: Relative Magazine Number.....3 bits Page Number.....8 bits Page Sub-Code.....13 bits Hamming Protection.....24 bits <b>NOTE</b> There is no response to the data in byte 37.
12.2. Basic Page Check Word	Data carried by packet X/1/27.
12.2.1. Clock Run-in, Framing Code and Packet Address	Bytes 1 to 5 inclusive as Sections 9 and 10.
12.2.2. Designation Code	Byte 6, 4 bits data plus 4 bits Hamming protection. Code 0000 designates basic page check word function
12.2.3. Basic Page Check Word	Bytes 7 and 8 contain a Cyclic Redundancy Check on the data in packets X/0/0 and X/T/1 to X/T/25. For check word generation see figure 13. No response to bytes 9 to 37.
<b>13. Broadcasting Service Data Packet</b>	Packet 4/1/30 transmitted approximately once per second. See figure 2.
13.1. Clock Run-in, Framing Code and Packet Address	Bytes 1 to 5 inclusive as Sections 9 and 10.
13.2. Designation Code	Byte 6, 4 bits data plus 4 bits Hamming protection. First data bit set to 0 designates multiplexed function as in Section 1.1. First data bit set to 1 designates non-multiplexed function as in Section 1.2. Data bits 2, 3 & 4 set to 0 designate functions in Sections 13.3. and 13.4. There is no response to other codes.
<b>13.3. Program or Network Label</b>	Bytes 7 and 8 containing 16 bits data with at least one data transition included.
13.4. Initial Teletext Page for Storage in Decoder Without User Action	Bytes 9 to 14, see figure 2 for bit sequence: Relative Magazine Number.....3 bits Page Number.....8 bits Page Sub-Code.....13 bits Hamming Protection.....24 bits
<b>13.5. Data for Equipment Control Includes Time and Date in UTC with Local Offset and Program Related Data</b>	Bytes 15 to 37. Where appropriate the coding is to be the common codes of the basic character set, see Sections 11.4. and figure 3. For data format see figure 12.

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14. Response of Decoder at Level 2	Decoder responds as level 1 plus packets X/0/26 and X/0/28. See figure 2.																																				
14.1. Control Bits in Page Header	As level 1, see Section 11.1.																																				
14.1.1. C4 to C11	Response as level 1 see Sections 11.1.1. to 11.1.8.																																				
14.1.2. C12, C13, C14 Basic Character Set Selection	Decoder displays text using selected basic character set as follows: <table><thead><tr><th>Alphabet</th><th>C12</th><th>C13</th><th>C14</th></tr></thead><tbody><tr><td>1) English, US version (see figure 3)</td><td>0</td><td>0</td><td>0</td></tr><tr><td>2) To be defined</td><td>0</td><td>0</td><td>1</td></tr><tr><td>3) To be defined</td><td>0</td><td>1</td><td>0</td></tr><tr><td>4) To be defined</td><td>0</td><td>1</td><td>1</td></tr><tr><td>5) To be defined</td><td>1</td><td>0</td><td>0</td></tr><tr><td>6) See Section 14.7.</td><td>1</td><td>0</td><td>1</td></tr><tr><td>7) See Section 14.7.</td><td>1</td><td>1</td><td>0</td></tr><tr><td>8) Reserved</td><td>1</td><td>1</td><td>1</td></tr></tbody></table>	Alphabet	C12	C13	C14	1) English, US version (see figure 3)	0	0	0	2) To be defined	0	0	1	3) To be defined	0	1	0	4) To be defined	0	1	1	5) To be defined	1	0	0	6) See Section 14.7.	1	0	1	7) See Section 14.7.	1	1	0	8) Reserved	1	1	1
Alphabet	C12	C13	C14																																		
1) English, US version (see figure 3)	0	0	0																																		
2) To be defined	0	0	1																																		
3) To be defined	0	1	0																																		
4) To be defined	0	1	1																																		
5) To be defined	1	0	0																																		
6) See Section 14.7.	1	0	1																																		
7) See Section 14.7.	1	1	0																																		
8) Reserved	1	1	1																																		
14.2. Page Display	As level 1, Section 11.2.1., exceptionally 24 complete rows, see Section 14.9.																																				
14.2.1. Rows Displayed	As level 1, see Section 11.2.2.																																				
14.2.2. Character Spaces in Rows 1 to 23	As level 1, see Section 11.2.3.																																				
14.2.3. Character Spaces in Row 0 Page Header	As level 1, see Sections 11.3., 12. and 13.																																				
14.3. Character Bytes	See Sections 14.4. and 14.6. and figure 2.																																				
14.3.1. Data Packets X/0/0 to X/T/24 , X/0/27 & 4/1/30	See Section 14.4. and 14.7. and figure 2.																																				
14.3.2. Data Packets X/0/26	a) Includes Full Latin Based repertoire of ISO 7 basic alphanumeric character sets of 94 characters each plus SPACE and DELETE, selected by Control Bits as in Section 14.1. Each extendable by the data in packets X/0/26, see Section 14.6. and redefinable by the data in packets X/0/28, see Section 14.7. b) Contiguous mosaics as level 1, see Section 11.4. and Smoothed mosaics, see Section 14.6.16 c) Separated mosaics as level 1, see Section 11.4. and Smoothed mosaics, see Section 14.6.16.																																				
14.3.3. Data Packets X/0/28	Selection between a), b) or c) is by means of control characters and the data in packets X/0/26, see Section 14.6. and the data in packets X/0/28, see Section 14.7.																																				
14.4. Character Sets for Display	Set of 32 control characters, 1 unallocated for level 2. Action as for level 1, see Section 11.5., except as defined in Sections 14.5.1. to 14.5.5. See also figure 5.																																				
14.5. Control Character Set for Spacing Controls Including Display Attributes	A-108 SAB6																																				

14.5.1.	Foreground Colours	As level 1 plus black, see Section 11.5.1. and figure 5.
14.5.2.	Underline Alphanumeric/ Separated Mosaic Graphics	Alphanumeric characters succeeding this control character are displayed underlined and mosaic characters are displayed in the separated mode as in Section 11.5.4. until the end of a display row of the receipt of a Cancel-Underline/ Contiguous Mosaic Graphics control character.
14.5.3.	Cancel-Underline Alpha- numerics/Contiguous Mosaic Graphics	See Section 14.5.2.
14.5.4.	Reduced Intensity	The background of alphanumeric characters and the foreground of mosaic characters are displayed at reduced intensity until the end of a display row or the second transmissio of the colour control character then obtaining. <u>NOTE</u> It is recommended that this control character should reduce the displayed luminance to a subjective level approximately 50% of that obtaining in the normal intensity mode.
14.5.5.	Cancel Reduced Intensity	See Section 14.5.4.
14.6.	Character Set Extension and Non-Spacing Control Characters Including Additional Display Attributes	Uses packet X/T/26 to over write any character- space. The original character and attribute condition is the editor defined fall-back for level 1 decoders.
14.6.1.	Clock Run-in, Framing Code and Packet Address	Bytes 1 to 5, see Sections 9 and 10.
14.6.2.	Designation Code	Byte 6, 4 bits data plus 4 bits Hamming protection Codes 0000 to 1110, with the tabulation bit T as most significant bit, as sequence codes for a number of packets X/26 unto 30. Codes T 1111 have no response.
14.6.3.	Data Groups	Bytes 7 to 36 used as 10 groups of 3 bytes each, a, b and c. See figure 2 for bit sequence. <u>a</u> and <u>b</u> (6 bits for display address (5 bits for mode description (5 bits Hamming protection <u>c</u> (7 bits data (1 bit odd parity Byte 37 has no response.
14.6.4.	Display Addressing	6 display address bits, as in Section 14.6.3. These provide 64 combinations. The decimal values 0 to 39 specify character spaces along a given display row and the decimal values 40 to 63 specify a particular display row. A character space is thus defined by a data group including a row address followed by one or more character position data groups.

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AN00

14.6.5.	Full Screen Colour Including Borders Outside Normal Text Display Area (1)	Invoked when the Mode Description bits of any Row Address data group are set to 00000. Data bits 5, 6 and 7 activate respectively the primary colours red, green and blue. Thus, for example bit values 000 correspond to black and 110 to yellow. Data bit 4 invokes reduced intensity, bits 1 to 3 are set to 0.
14.6.6.	Full Row Colour Including Borders Outside Normal Text Display Area (1)	Invoked when the Mode Description bits of the appropriate Row Address data group are set to 01000. Data bits 5, 6 and 7 activate respectively the primary colours red, green and blue. Thus, for example bit values 000 correspond to black and 110 to yellow. Data bit 4 invokes reduced intensity, bits 1 to 3 are set to 0.
14.6.7.	Full Screen Pastel Colours Including Borders Outside Normal Text Display Area (1)	Invoked when the Mode Description bits of any Row Address data group are set to 00001. Data bits 1 to 3 and 5 define 16 pastel colours. Bit 4 invokes reduced intensity, see figure 8.
14.6.8.	Full Row Pastel Colours Including Borders Outside Normal Text Display Area (1)	Invoked when the Mode Description bits of the appropriate Row Address data group are set to 01001. Data bits 1 to 3 and 5 define 16 pastel colours. Bit 4 invokes reduced intensity, see figure 8.
<p><u>NOTE 1</u> Background colours when defined explicitly and foreground colours take precedence over Full Row colours and Full Row colours take precedence over Full Screen colours.</p>		
14.6.9.	Accented Characters from Supplementary Character Set	For display at a character-space addressed as in Section 14.6.4. The Mode Description bits set at the range of values 10000 to 11111 respectively define accents for column 4 of the code table figure 6 in ascending numerical order. The associated character from the primary character set of figure 3 is defined by the 7 data bits.
14.6.10.	Special Characters from Supplementary Character Set	For display at a character-space addressed as in Section 14.6.4. The Mode Description bits are set at 01111. The 7 data bits define a character from columns 2, 3, 5, 6 or 7 from the supplementary character set of figure 6.
14.6.11.	Alphanumerics, Normal Size with Colour and Flashing Attributes (2)	For normal size alphanumeric display at a character-space addressed as in Section 14.6.4. The Mode Description bits are set to 00000. Data bits 1, 2 and 3 activate respectively the foreground primary colours red, green and blue. Thus for example bit values 000 correspond to black, 110 to yellow and 111 to white. Bit 4 activates Flashing. Bits 5, 6 and 7 define the background colour in the same manner as in the case of bits 1, 2 and 3 for the foreground colour.

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14.6.12.	Alphanumerics, Double Height with Colour and Flashing Attributes (2)	As Section 14.6.11. except the Mode Description bits are set to 00001. Characters to be stretched vertically as in Section 11.5.4.
14.6.13.	Alphanumerics, Double Width with Colour and Flashing Attributes (2)	As Section 14.6.11. except the Mode Description bits are set to 00010. Characters to be stretched horizontally to occupy in addition the next character-space.
14.6.14.	Alphanumerics, Double Size with Colour and Flashing Attributes (2)	As Section 14.6.11. except the Mode Description bits are set to 00011. Characters to be stretched vertically and horizontally as in Sections 14.6.12. and 14.6.13.
14.6.15.	Block Mosaics, Normal and Contiguous with Colour and Flashing Attributes (2)	For normal (not smoothed) mosaic display at a character-space addressed as in Section 14.6.4. The Mode Description bits are set to 00110. Data bits 1, 2 and 3 activate respectively the foreground primary colours red, green and blue. Thus for example bit values 000 correspond to black, 110 to yellow and 111 to white. Bit 4 activates Flashing. Bits 5, 6 and 7 define the background colour in the same manner as in the case of bits 1, 2 and 3 for the foreground colour.
14.6.16.	Block Mosaics, Smoothed and Contiguous with Colour and Flashing Attributes (2)	As Section 14.6.15. except the Mode Description bits are set to 00111. For the smoothed mosaic graphics character set see figure 9.
14.6.17.	Underline Alphanumerics or Separated Mosaics (3)	Activated at a character-space addressed as in Section 14.6.4. Invoked by the Mode Description bits set to 00110 and Data bit 1 set to 1.
14.6.18.	Boxing (3)	Activated at a character-space addressed as in Section 14.6.4. Invoked by the Mode Description bits set to 00110 and Data bit 2 set to 1.
14.6.19.	Conceal (3)	Activated at a character-space addressed as in Section 14.6.4. Invoked by Mode Description bits set to 00110 and data bit 3 set to 1.
14.6.20.	Reduced Intensity Foreground and Background (3)	Acitvated at a character-space addressed as in Section 14.6.4. Invoked by Mode Description bits set to 01100 and Data bit 4 set to 1 for foreground and Data bit 5 set to 1 for background.
14.6.21.	Pastel Colours in Foreground and Background and Flashing	Activated at a character-space addressed as in Section 14.6.4. Invoked by the Mode Description bits set to the range 01000 to 01011. The Mode Description bits and the Data bits define 16 foreground and background colours and the associated Flashing attribute. See figure 7.
<u>NOTE 2</u> The effect of these attribute controls persists to the end of a row or until overridden by a further attribute control		
<u>NOTE 3</u> see page 9.		A-111 <i>AB59</i>

#### 14.6.22. Termination Marker

##### 14.6.22.1. Packet X/0/26 and X/0/28 Check Word

NOTE 3 These attribute controls are mutually additive and are associated with an attribute invoked as in Sections 14.6.11 to 14.6.16. Their effect is as in NOTE 2 and they may also be overridden by a transmission of the data group with the corresponding data bit set to 0.

Since more than one packet X/0/26 may be needed to display a given page, a terminator is provided by setting the Mode Description bits to 11111 in the final row address data group of the final packet X/0/26

The two data bytes that follow a packet X/0/26 termination marker contain a Cyclic Redundancy Check on the data in packets X/0/26 and X/0/28. The process of generating the check word is identical to that of Section 12.3.3., using the data in packets X/0/26 followed by X/0/28. The sequence is completed by assuming the presence of the character SPACE (2/0) repeated as necessary. When only a packet X/0/28 carries data, only the termination marker and the C.R.C. check word will be carried by packet X/0/26.

#### 14.7. Basic Character Set Dynamic Redefinition

In addition to the fixed alphabets 1 to 5 listed in Section 14.1.2. the 10 blank positions in the code table of figure 3 may be redefined on a page or magazine basis using the data contained in packet X/0/28.

In the packet associated function packets X/0/28 follow packet X/0/0 of the page in transmission sequence of that magazine. In the magazine based function it may follow any packet of that magazine.

Page Header Control bits C12, C13 and C14 set respectively to 1, 0 and 1 invoke page associated function.

Page Header Control bits C12, C13 and C14 set respectively to 1, 1 and 0 invoke magazine associated function.

Bytes 1 to 5 inclusive, as in Sections 9 and 10.

##### 14.7.1. Clock Run-in, Framing Code and Packet Address

Byte 6, 4 bits data plus 4 bits Hamming protection Magazine associated function designated by data bits set to 0000. Page associated function designated by data bits set to 0010.

##### 14.7.2. Designation Code

Bytes 7 to 36 used as 10 groups of 3 bytes each, a, b and c:

a and b (11 bits data  
              (5 bits Hamming protection

c (4 bits data  
              (4 bits Hamming protection

##### 14.7.3. Data Groups

The sequence of 10 data groups defined in Section 14.7.3. represents a sequence of 10 data words each containing 7 + 7 bits. Each word redefines one of the blank positions in the code table of figure 3, in columns, top to bottom, from position 4/0 to position 7/14 proceeding in time along the packet X/0/28.

##### 14.7.3.1. Character Code Table Addressing

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Atlo

14.7.3.2. Character Coding	The allocation of the data bits of Section 14.7.3. is as follows: Bit 1: always set to 0. Bits 2 to 8: represent a character from the primary set of figure 3. Bits 9 to 14: represent a character from the supplementary set of figure 6. When this represents an accent it is combined with the character from the primary set defined by bits 2 to 8. When a special character from the supplementary set is defined, bits 2 to 8 are set to represent the character SPACE (2/0). <u>NOTE</u> There is no response to byte 37 of packet X/0/28 in this mode.
14.8. Pastel Colours Dynamic Redefinition Page Associated	The 16 pastel colours of Sections 14.6.6., 14.6.7 and 14.6.21. may be redefined on a page basis using the data contained in packet X/0/28. Packets X/0/28 follow packets X/0/0 of the page in transmission sequence of that magazine.
14.8.1. Clock Run-in, Framing Code and Packet Address	Bytes 1 to 5 inclusive, as in Sections 9 and 10.
14.8.2. Designation Code	Byte 6, 4 bits data plus 4 bits Hamming protection. Designated by data bits set to 0011.
14.8.3. Data Groups	Bytes 7 to 36 used as 15 groups of 11 bits data plus 5 bits Hamming protection.
14.8.4. Display Colour Coding	The sequence of 15 data groups provides 16 data words of 9 bits each. Each data word defines one 8 possible levels respectively, of the 3 primary colours, red, green and blue. The first 8 data words in time sequence, replace group A of the colours defined in figure 7, the second 8 data words replace the colours of group B in figure 7. <u>NOTE</u> There is no response to byte 37 of packet X/0/28 in this mode.
14.9. Additional Row Display	This mode of operation has been defined to accomodate the need to transmit and display pages having a non-standard format.
14.9.1. Invocation	Control bit C7 in the page header packet X/0/0 (suppress header) set to 1.
14.9.2. Response of Decoder	Displays packets X/T/1 to X/T/24 in the normal pa area. For enhanced modes (see Section 14.6.4.), t address code carrying the decimal value 40 define display row 24.
15. Response of Decoder at Level 3	Decoder responds to packets as level 2 plus additional codes in the hexadecimal range, permit a set, or a pair of co-defined sets of characters to be down loaded into the decoder. A range of colour controls can be down loaded with the characters.
15.1. Range of Colours	See Section 16.
15.2. Range of Colour Controls	See Section 16.
15.3. Full Page Application	These pages can not be acquired by level 1 and level 2 decoders.

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15.3.1.	Access Page Per Magazine	Page A0.
15.3.2.	Page Sub-Codes	Any except 3F7F.
15.3.3.	Format of Packets Carrying Page A0	As level 2.
15.3.4.	Down Loading Procedure	Uses data contained in Page A0, page sub-code 3F7F, see Section 16.
15.3.5.	Display Procedure	User selects magazine X, page A0, and any page sub-code except 3F7F.
15.3.5.1.	Decoder Action	<p>a) If a packet X/0/0 of page A0, page sub-code 3F7F immediately follows packet X/0/0 of page A0 including the selected page sub-code, load the DRCS as in Section 16.</p> <p>b) If a) above does not apply, then await the next packet X/0/0 of page A0, page sub-code 3F7F. If the magazine associated function bit C4 in this packet is set to 1, load the DRCS as in Section 16.</p> <p>c) If the page associated function has been invoked the sequence of packets as e) below follows immediately and they are acquired.</p> <p>d) If magazine associated function has been invoked the sequence of packets as e) below follows the transmission of packet X/0/0 of page A0 with the selected page sub-code and they are acquired.</p> <p>e) The first packet X/T/26 is now transmitted. In the row address groups of these packets, bit 4 set to 1 indicates magazine associated function and set to 0 indicates page associated function. This bit has no meaning when the DRCS mode is not invoked. The mode description bits of a character space address group set to 00100 invokes the first of two or a single DRCS and set to 00101 invokes the second of two co-defined DRCS. Other Mode Description bits have the same meaning as a level 2.</p> <p>f) The data in packets X/T/1 to X/T/23 is then displayed using the DRCS for the display rows defined by packets X/T/26 as in e) above.</p> <p>g) Further packets X/T/26 may be transmitted to provide non-spacing and off display area attributes. The character-space function of packet X/T/26 is at level 2 and can overwrite the DRCS with primary or supplementary set character. In addition to the functions as in level 2, the basic character set is invoked by transmission of the NUL accent character (4/0).</p>
15.4.	Character Set Extension Using DRCS	Uses packet X/T/26 to overwrite any character position of the basic page as in level 2, but with characters from a DRCS, also a range of colour controls.
15.4.1.	Down Loading Procedure	Uses data contained in page A0, page sub-code 3F7F, see Section 16.

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## 15.4.2. Display Procedure

### 15.4.2.1. Decoder Action - DRCS Acquisition

User selects magazine X, and a page that includes DRCS characters.

- a) Following packet X/0/0 of the selected page, there follows the packets X/T/26. In the row address groups of these packets, mode bit 4 set to 1 indicates magazine associated function and set to 0 indicates page associated function. This bit has no meaning when the DRCS mode is not invoked. The character-space Mode Description bits are set to 01101 for a single DRCS or the first of two, or are set to 01110 for the second of two co-defined DRCS.
- b) If a packet X/0/0 of page A0, page sub-code 3F7F immediately follows the final packet X/T/26 of a given page and C4 is set to 0 indicating page associated function, then load the DRCS as in Section 16.
- c) If b) above does not apply and Mode bit 4 is set to 1 as in a) above, await the next packet X/0/0 of page A0, page sub-code 3F7F. If C4 in this packet is set to 1, indicating magazine associated function, load the DRCS as in Section 16.

### 15.4.2.2. Decoder Action - Display

A second transmission of packet X/0/0 of the selected page now precedes the transmission of packets X/T/1 to X/T/23 of that page. To overwrite using packet X/T/26 at a character-space addressed as in Section 14.6.4. The Mode Description bits are set to 01101 for a single or first of a pair of DRCS; they are set to 01110 for the second of a pair of co-defined DRCS. The 7 data bits define a character for display from the DRCS.

## 16. Dynamically Redefinable Character Sets - Down Loading Procedure

### 16.1. Clock Run-in and Framing Code

### 16.2. Addressing

#### 16.2.1. Packet Numbers X/0/0 to X/0/25

### 16.3. Packets X/0/0

#### 16.3.1. Page Number

#### 16.3.2. Page Sub-Code

#### 16.3.3. Page Sequence and Colour Sequence Codes

##### 16.3.3.1. Colour Sequence Code

Carried by a page A0, page sub-code 3F7F, using packets X/0/0 to X/0/25. The sequence of packets is repeated as necessary, see Section 16.3.3.

See Section 9.

Bytes 4 and 5 Hamming protected.  
2 binary digits for magazine number X.  
1 binary digit set to 0.  
5 binary digits for packet sequence numbers 0-25.

Bytes 6 and 7 Hamming protected, coded with page number A0.

Bytes 8, 9, 10, 11 Hamming protected and coded 3F7F. The included control bit C4 is set to 0 to invoke page associated function. When C4 is set to 1 magazine associated function is invoked. The included control bits C5 and C6 are set to 0. See Section 10.2.2.

Byte 12, 4 bits data and 4 bits Hamming protection.

Byte 12, data bit 1. When set to 0, all mode controls and colours for downloading are in the first packet X/0/0 of the sequence as in Section 16.3.4. When set to 1, the first 16 bytes of 32 are in the first packet X/0/0 as above and the second 16 bytes are in the second packet X/0/0 of the sequence as in Section 16.3.5.

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M-10

16.3.3.2.	Page Sequence Code	Byte 12, data bits 2 to 4. The bit combinations 000 to 111 are used as sequence codes for the series of pages A0, page sub-code 3F7F.
16.3.4.	Mode and Colour Data First Packet X/0/0	Bytes 13 to 34: a) Mode Controls.....2 or 3 bytes b) Colours to be Down Loaded....0/16 bytes c) Start Control.....1 byte d) Address in Columns 2-7 of Code Table of First Character to be Down Loaded.....2 bytes
16.3.5.	Colour Data Second Packet X/0/0	Bytes 13 to 30: a) Colours to be Down Loaded, second half of 32 bytes when required..16 bytes b) Address in Columns 2-7 of Code Table of Next Character to be Down Loaded.....2 bytes
16.3.5.	Third and Subsequent Packets X/0/0	Bytes 13 and 14: Carry Address in Columns 2-7 of Code Table of Next Character to be Down Loaded.....2 bytes
16.4.	Packets X/0/1 to X/0/25 of Sequence of Pages A0, Page Sub-Code 3F7F	Bytes 6 to 37: a) Character Data....number of bytes depends upon mode b) Character Terminate Control.....1 byte c) Subsequent Characters in numerical order completing each column, each character followed by the Character Terminate Control as in b) above..as b) d) Termination of Down Loading Control.....1 byte
16.5.	<u>Character Sets Down Loadable</u>	A set, or a pair of co-definable sets of 94 characters on a 12 or 6 dot per raster line matrix, depending upon the mode selected. The matrix has 10 or 5 raster lines vertically depending upon the mode selected.
16.6.	Down Loading Codes	16 standard control codes, 64 dot pattern codes, 31 DRCS mode control and instruction codes. See figure 10.
16.7.	Modes	<u>Basic</u> display attributes are as for non-DRCS operation. <u>Colour</u> colour controls and colours also down loaded.
16.7.1.	Basic Mode High Definition	<u>Display</u> 12 dots per raster line, nominally 10 raster lines per matrix. <u>Mode Controls</u> 6/0, 6/3 <u>Character Data</u> 2 bytes per raster line. First byte specifies even numbered dots (0 to 10). Second byte specifies odd numbered dots (1 to 11). The code bits b1, b2, b3, b4, b5 and b7 correspond directly to the dot pattern. Each complete matrix is terminated by the code 7/4.

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AN-09

16.7.2. Basic Mode  
Low Definition

Display 12 dots per raster line, defined in pairs [(0,1) to (10,11)], nominally 10 raster lines per matrix. Two low definition sets may be co-defined.

Mode Controls Single low definition set or first of a pair of co-defined sets 6/0, 6/2, 6/4 Second of a pair of co-defined sets 6/0, 6/2, 6/5.

Character Data 1 byte per raster line. Each bit specifies a pair of dots.  
Each complete matrix is terminated by the code 7/4.

This mode is the fallback for decoders having only 6 dot DRCS capability.

16.7.3. Colour Mode

1 value of horizontal definition, 12 dots per raster line defined in pairs.  
2 values of vertical definition, 10 raster lines per matrix for high definition or 5 raster lines per matrix for low definition.  
2 methods of colour control, red, green and blue primary colours with two levels of intensity (see Section 16.7.3.1.) or 16 down loaded specified colours (see Section 16.7.3.2.).

16.7.3.1. Colour Using Three Primary Colours

Display 12 dots per raster line, defined in pairs as in Section 16.7.2. Activation of red, green and blue with normal or reduced intensity.

Mode Control high definition 6/1, 6/3, 6/6.  
low definition 6/1, 6/2, 6/6.

Character Data Dot patterns for compete matrix transmitted respectively for red, green, blue and intensity, i.e. four patterns for each compete matrix.

The transmissions for red, green, blue and intensity are respectively preceded by one of the delimiter codes 7/0, 7/1, 7/2 or 7/3. Only those required are transmitted and the compete matrix is terminated by the control code 7/4.

16.7.3.2. Colour Using 16 Down Loaded Colours

Display 12 dots per raster line, defined in pairs as in Section 16.7.2. any one of 16 colours may be associated with any dot pair. For colour down loading procedure see Sections 16.7.3.3. and 16.7.3.4.

Mode Controls high definition 6/1, 6/3 and 6/7 or 6/8, see Section 16.7.3.3. and 16.7.3.4.  
low definition 6/1, 6/2 and 6/7 or 6/8, see Section 16.7.3.3. and 16.7.3.4.

Character Data Dot patterns for the complete matrix transmitted 4 times. The resultant 4 bits associated with each dot pair will thus have values in the range 0000 to 1111 in order to define one of the 16 colours. The transmissions define the 4 bits in order of decreasing significance and are preceded respectively by the delimiter codes 7/0, 7/1, 7/2 and 7/3. The complete transmission of the matrix is terminated by the control 7/4.

16.7.3.3. Colour Down Loading 16 Colours from a Set of 64	<u>Display</u> Each colour is defined by 1 of 4 levels of red, green and blue primary colours. <u>Mode Controls</u> as Section 16.7.3.2. using the codes 6/1, 6/3 and 6/7. <u>Colour Data</u> 16 groups of 6 bits define 1 of 4 levels for respectively red, green and blue primary colours. Bits b1, b2, b3, b4, b5 and b7 of the codes in figure 10 are used. The sequence of 16 groups of 6 bits correspond to the colours invoked in Section 16.7.3.2.
16.7.3.4. Colour Down Loading 16 Colours from a Set of 4096	<u>Display</u> Each colour is defined by 1 of 16 levels of red, green and blue primary colours. <u>Mode Controls</u> as Section 16.7.3.2. using the codes 6/1, 6/3 and 6/8. <u>Colour Data</u> 16 groups of 12 bits define 1 of 16 levels for respectively red, green and blue primary colours. Bits b1, b2, b3, b4, b5 and b7 of the codes in figure 10 are used twice for each group. The sequence of 16 groups of 12 bits correspond to the colours invoked in Section 16.7.3.2.
17. Response of Decoder at Level 4 Alphageometric Coding	Page addresses in the range A1 to FF and associated page sub-codes are reserved for this function. To be implemented when the coding details are specified. (1)
18. Response of Decoder at Level 5 Alphaphotographic Coding	Page addresses in the range A1 to FF and associated page sub-codes are reserved for this function. To be implemented when the coding details are specified. (1)
19. <u>Telesoftware</u> Transmission of Computer Programs and Similar Data Not For Display. Applicable to a Range of Levels to be Associated with Those Defined for Text and Similar Display.	Page addresses in the range A1 to FF and associated page sub-codes are reserved for this function. To be implemented when details are specified. (1)
	<u>NOTE 1</u> These digits are in the hexadecimal range.

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FORMAT OF PACKETS X/0/0 to X/T/23

Packet X/0/0	Clock Run-in	Clock Run-in	Framing Code	Magazine Number, Tabulation & Packet Address	Page Number Units	Page Number Tens	Control Bits	Control Bits
Packets X/T/1 - X/T/23	Clock Run-in	Clock Run-in	Framing Code	Magazine Number, Tabulation & Packet Address		32 Character Bytes Odd Parity		

$2^0$     $2^1$     $2^0$     $2^0$     $2^1$     $2^2$     $2^3$     $2^4$

P = Protection Bits  
M = Data Bits

Magazine Number Tabulation  
and Row Address

and Now Address

Hamming Code Synchronisation

8 Hamming Codes

24 Character Bytes  
Odd Parity

Figure 1

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FORMAT OF PACKETS X/0/26 X/0/27 X/0/28 4/1/30

Packet X/0/26 - X/0/28	Clock Run-in	Clock Run-in	Framing Code	Magazine Tabulation and Packet Address	Designation Code	First Three or Six Byte Data Group	
Packet X/0/26	P M P M P M P M	P P A P A A P	A A m m m m P	D D D D D D D P	Ten Three Byte Groups in Each Packet	A = Address m = Mode P = Hamming	
	1 2 1 3 2 3 4 5	5 6 1 2 3 4 5 4	Data odd parity				
	P5 is add parity hit 1st byte						
Packet X/0/28	O p p p r p s s s P P P P P P	P S P s P s P s	Ten Three Byte Data Groups in Each Packet	0 = Bit always set to 0 p = Primary Set Character P = Protection Bits s = Supplementary Set Character			
Packet X/0/27	Six bytes containing Relative Magazine Number, Page Number ar.: Page Sub-Code. For bit sequence see NOTE		Five Groups of Six Bytes Each in Each Packet	When Tabulation bit is set to 1 and designation code to 0000 bytes 7 & 6 are a basic page check word	17		
Packet 4/1/30	Framing Code	Magazine Tabulation and Packet Address	Designation Code	Programme or Network Label	One 6 byte group Coded as packet	Equipment Control Group Bytes 15 to 37	
					X/0/27		

NOTE Page Number and Page Sub-Code have the same format as bytes 6 to 11 of the Page Header (see figure 1), packet X/0/0. The bits C4, C5 and C6 in this sequence are used to change the magazine number from that in bytes 4 and 5 of the packet X/0/27. Setting any of these bits to 1 complements the corresponding magazine number bit.

In all cases the LEAST SIGNIFICANT bit is transmitted first.

2-120

SAK

	2	3	4	5	6	7
0	SP	0	(1)	P	(1)	p
1	!	1	A	Q	a	q
2	"	2	B	R	b	r
3	#	3	C	S	c	s
4	\$	4	D	T	d	t
5	%	5	E	U	e	u
6	&	6	F	V	f	v
7	'	7	G	W	g	w
8	(	8	H	X	h	x
9	)	9	I	Y	i	y
10	*	:	J	Z	j	z
11	+	;	K	(1)	k	(1)
12	,	<	L	(1)	l	(1)
13	-	=	M	(1)	m	(1)
14	.	>	N	(1)	n	(1)
15	/	?	O	-	o	DEL

Figure 3

PRIMARY CHARACTER SET, COMMON CHARACTERS

(1) National Option variation, see Table on  
following page.

For 7 bit coding, bits 1-4 define row in ascending order  
and bits 5-7 define columns in ascending order.

A-121  
At&T

TABLE POSITION	ENGLISH U.S.USE
4/0	€
5/11	[
5/12	\
5/13	]
5/14	^
6/0	,
7/11	{
7/12	
7/13	}
7/14	~

Figure 3 continued

PRIMARY CHARACTER SET, NATIONAL OPTION  
FOR U.S. USE.

A-122

Analog

	2	3	6	7
0	oo oo	oo +o	oo o+	oo ++
1	+o oo oo	+o oo +o	+o oo o+	+o oo ++
2	o+ oo oo	o+ oo +o	o+ oo o+	o+ oo ++
3	++ oo oo	++ oo +o	++ oo o+	++ oo ++
4	oo oo	oo +o	oo o+	oo ++
5	+o oo	+o oo	+o oo	+o oo
6	o+ oo	o+ oo	o+ oo	o+ oo
7	++ oo	++ oo	++ oo	++ oo
8	oo oo	oo +o	oo o+	oo ++
9	+o oo	+o oo	+o oo	+o oo
10	o+ oo	o+ oo	o+ oo	o+ oo
11	++ oo	++ oo	++ oo	++ oo
12	oo ++ oo	oo ++ oo	oo ++ oo	oo ++ oo
13	+o oo	+o oo	+o oo	+o oo
14	o+ oo	o+ oo	o+ oo	o+ oo
15	++ oo	++ oo	++ oo	++ oo

Figure 4

## MOSAIC GRAPHIC CHARACTER SET

o = Background Colour  
 + = Foreground Colour

In the Mosaic Graphics Mode the Alphanumeric Characters from the Code Table of Figure 3 are included in Columns 4 & 5. Bit allocation is as figure 3.

A-123

A-123

	0	1
0	(4)	(4)
1	Alpha Red	Mosaic Red
2	Alpha Green	Mosaic Green
3	Alpha Yellow	Mosaic Yellow
4	Alpha Blue	Mosaic Blue
5	Alpha Magenta	Mosaic Magenta
6	Alpha Cyan	Mosaic Cyan
7	Alpha White <sup>(1)</sup>	Mosaic White
8	Flash	Conceal(2)
9	Steady <sup>(1)</sup> <sup>(2)</sup>	Contig(1) Mosaic(2)
10	End(1) Box(2)	Separ Mosaic
11	Start Box <sup>(3)</sup>	(5)
12	Norm(1) Hght(2)	Blk (1) Bkgd(2)
13	Dble Hght	New Bkgd (2)
14	(4)	Hold Mosaic <sup>(2)</sup>
15	(4)	Release <sup>(1)</sup> Mosaic

TABLE POSITION	
0/	
0/	Reduced Intensity
1/0	Mosaic Black
1/9	Underline Stop & Contig M
1/10	Underline Start & Sep Mos

- (1) Presumed at the start of each row.
- (2) Action 'Set At', others are 'Set After'.
- (3) Two consecutive codes are transmitted, action takes place between them.
- (4) No action at level 1.
- (5) No action at level 1 or 2.

Figure 5  
CONTROL CHARACTER SET FOR SPACING ATTRIBUTES

A-125  
A-22

	2	3	4	5	6	7
0		°		—	ℳ	ℳ
1	i	±	ˇ	1	Æ	æ
2	¢	²	ˊ	(R)	™	đ
3	£	³	^	(C)	a	
4	\$	X	~	TM	†	‡
5	¥	u	—	♪		♪
6	#	Π	ˇ	£E	ŋ	ŋ
7	¤	·	·		L	l
8	¤	÷	..		č	č
9	‘	’			š	š
10	“	”	°		Œ	œ
11	«	»	„		º	ß
12	←	↖		1/8	‡	♪
13	↑	↖	“	3/8	‡	‡
14	→	↗	„	5/8	ŋ	ŋ
15	↓	↴	ˇ	7/8	ŉ	

Figure 6

SUPPLEMENTARY CHARACTER SET

Column 4 contains accents to be associated with characters from the Primary Character Set of figure 3.

Bit allocations are as figure 3

- (1) This character represents the European Currency Unit and is proposed for inclusion at position 5/6.

The European Broadcasting Union has proposed that °/oo (per mil) be included. No position in the code table has been allocated.

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MODE BITS	FOREGROUND COLOUR GROUP	BACKGROUND COLOUR GROUP
01000	A	A
01001	A	B
01010	B	B
01011	B	A

DATA BITS			COLOUR REFERENCE NUMBER
b7 b6 b5			
b3 b2 b1			
0 0 0			1 A or B
0 0 1			2 A or B
0 1 0			3 A or B
0 1 1			4 A or B
1 0 0			5 A or B
1 0 1			6 A or B
1 1 0			7 A or B
1 1 1			8 A or B
16 colours in all			

The chromaticities of the colours are to be defined.

Bits b7, b6, b5 define the background colour  
 Bits b3, b2, b1 define the foreground colour  
 Bit b4 invokes flashing

Figure 7

INVOCATION OF PASTEL COLOURS IN FOREGROUND AND BACKGROUND

b5	b3	b2	b1	COLOUR REFERENCE NUMBER
0 = GROUP A	0	0	0	1 A or B
1 = GROUP B	0	0	1	2 A or B
	0	1	0	3 A or B
	0	1	1	4 A or B
	1	0	0	5 A or B
	1	0	1	6 A or B
	1	1	0	7 A or B
	1	1	1	8 A or B

The chromaticities of the colours are to be defined,  
 but shall be the same as those of figure 7.

Bit b4 invokes reduced intensity.

Figure 8

INVOCATION OF PASTEL COLOURS FOR FULL SCREEN AND FULL ROW ATTRIBUTES

A-127

A-128

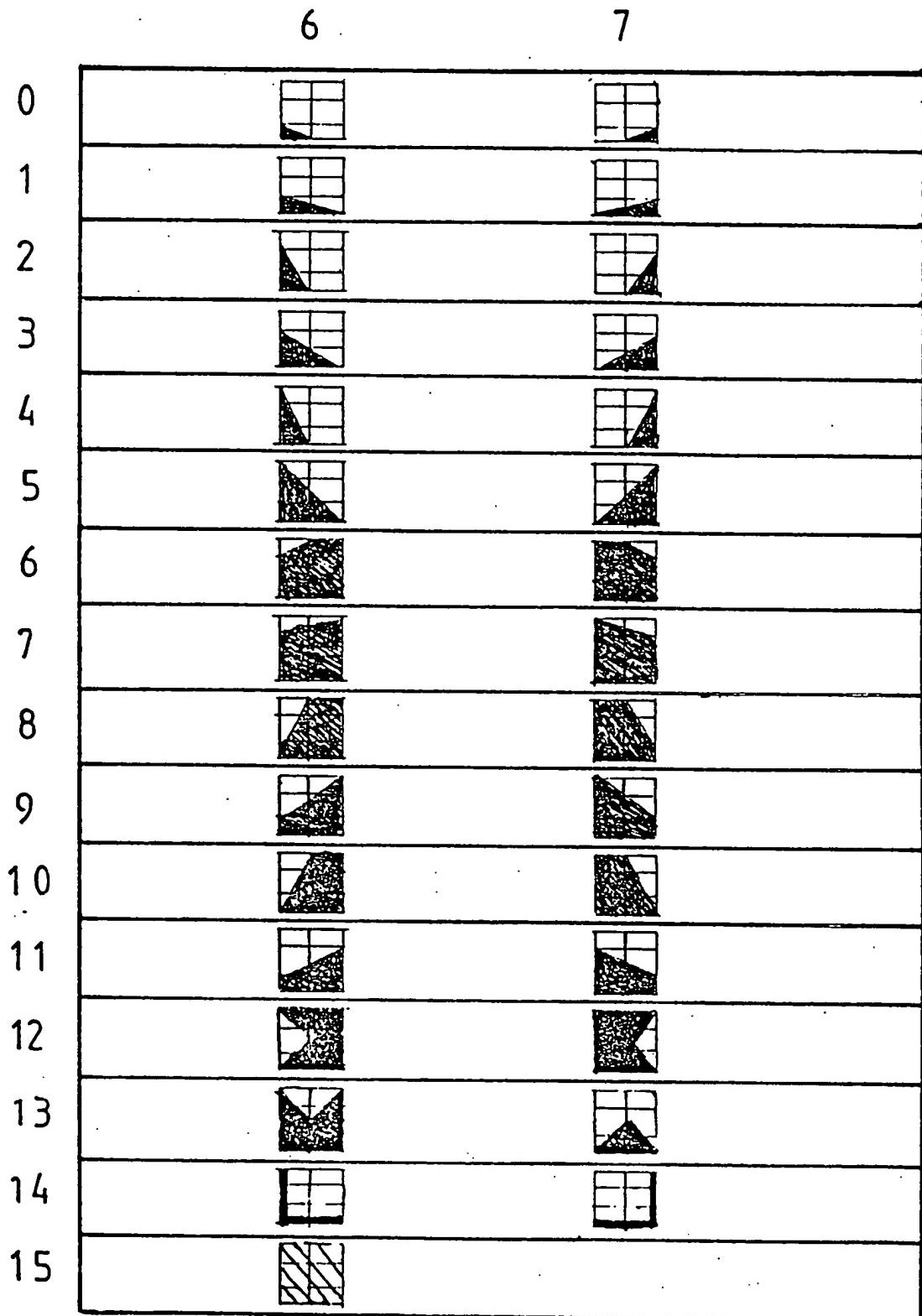


Figure 9 SMOOTHED MOSAIC GRAPHICS SET

Columns 2, 3, 4, & 5 are unallocated and the position 7/15 corresponds to the character DEL. The character in position 6/15 invokes the illumination of alternate dots of a mosaic rectangle.

The horizontal component of the characters in positions 4/14 and 5/14 are invoked by the Separated Mosaic/Underline Alphanumeric Mode.

A-12c  
Anney

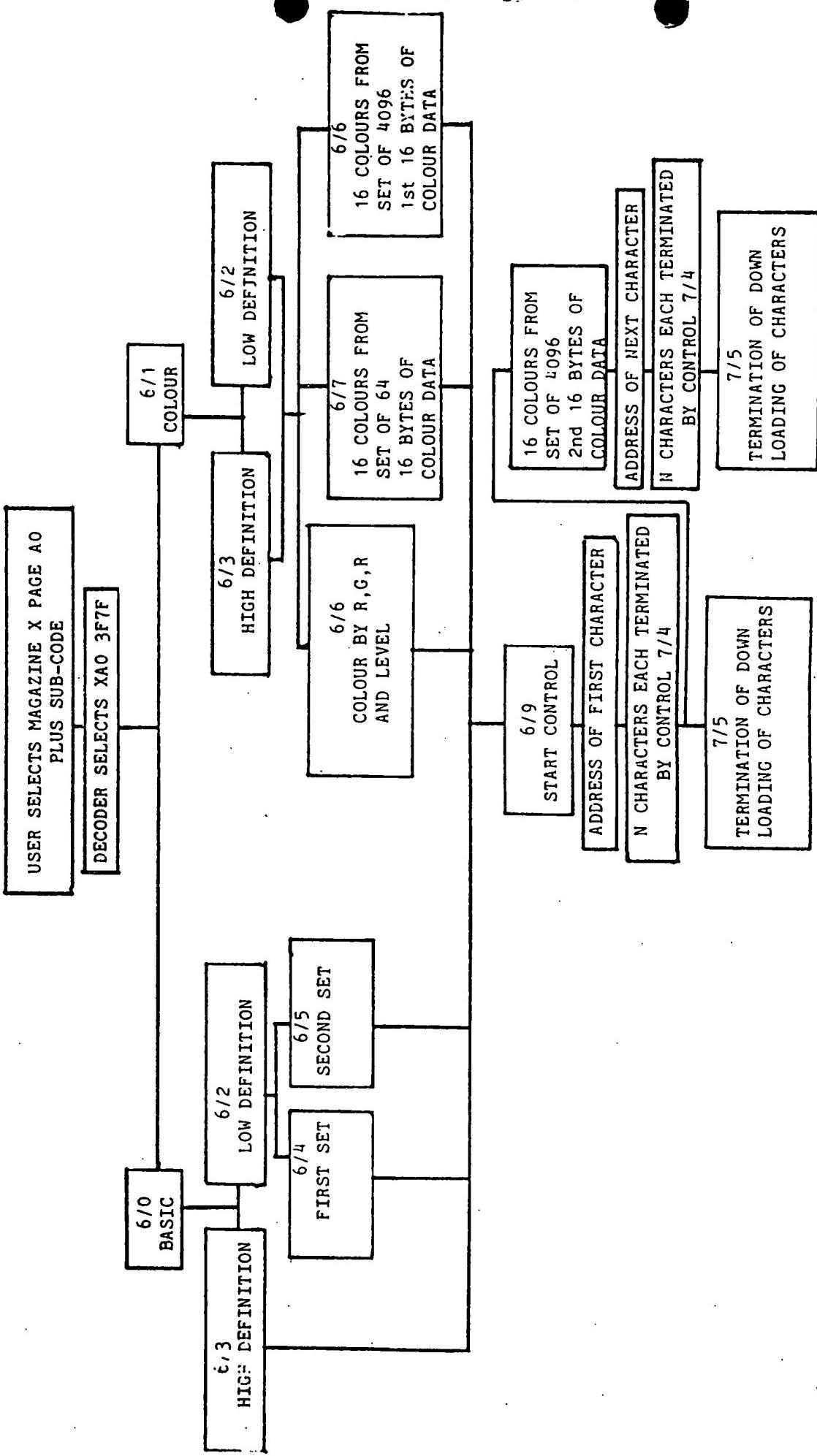


Figure 10  
DOWN LOADING PROCEDURE FOR DRCS

A-129  
A-128

	0 & 1	2-5	6	7
0	(1)	(2)	BASIC MODE	COLOUR DELIMITER 1
1	(1)	(2)	COLOUR MODE	COLOUR DELIMITER 2
2	(1)	(2)	LOW DEFINITION	COLOUR DELIMITER 3
3	(1)	(2)	HIGH DEFINITION	COLOUR DELIMITER 4
4	(1)	(2)	FIRST SET	TERMINATE CHARACTER
5	(1)	(2)	SECOND SET	TERMINATE DOWN LOADING
6	(1)	(2)	COLOUR BY R,G,B & Lev.	(3)
7	(1)	(2)	16 COLOURS FROM 64	(3)
8	(1)	(2)	16 COLOURS FROM 4096	(4)
9	(1)	(2)	START CONTROL	(4)
10	(1)	(2)		(4)
11	(1)	(2)		(4)
12	(1)	(2)		(4)
13	(1)	(2)		(4)
14	(1)	(2)		(4)
15	(1)	(2)		(4)

- (1) These columns reserved for standard control characters
- (2) These columns contain character and colour codes for down loading
- (3) These codes are reserved for future standardisation
- (4) These codes are reserved for use in the Videotex service

For 7 bit coding, bits 1-4 define rows in ascending order  
and bits 5-7 define columns in ascending order

Figure 11  
CONTROL CODES FOR DRCS DOWN LOADING PROCEDURE

A-130  
A-227

Broadcast Service Data Packet Byte	Function	Bit Allocation
15 Local Time Zone	Undefined. Polarity, set to 1 when behind UTC (eg USA). Magnitude of offset from UTC in units of $\frac{1}{2}$ hour. Undefined	Bit 1 Bit 2 Bits 3 - 7
16 Year Type and Day (1)	Set at 1 when this year or next year is leap year. Set at 1 when this year or last year is leap year. January 1st day of week. UTC day of week.	Bit 8 Bit 1 Bit 2 Bits 3 - 5 Bits 6 - 8
17 Week	Undefined. Week Number 1 to 53 according to ISO 2015.	Bits 1 and 2 Bits 3 - 8
18 Hours	Undefined. UTC Hours 10's. UTC Hours units.	Bits 1 and 2 Bits 3 and 4 Bits 5 - 8
19 Minutes	Undefined. UTC Minutes 10's. UTC Minutes units.	Bit 1 Bits 2 - 4 Bits 5 - 8
20 Seconds	Set to 1 during minute containing a leap second. UTC Seconds 10's. UTC Seconds units.	Bit 1 Bits 2 - 4 Bits 5 - 8

Figure 12 Time and Date Coding for Broadcast Data Packet

NOTE 1

Days of the week are numbered from Monday = 1 to Sunday = 7

A given packet time signal indicates the time at the occurrence of the next such packet.

A-131

AMM

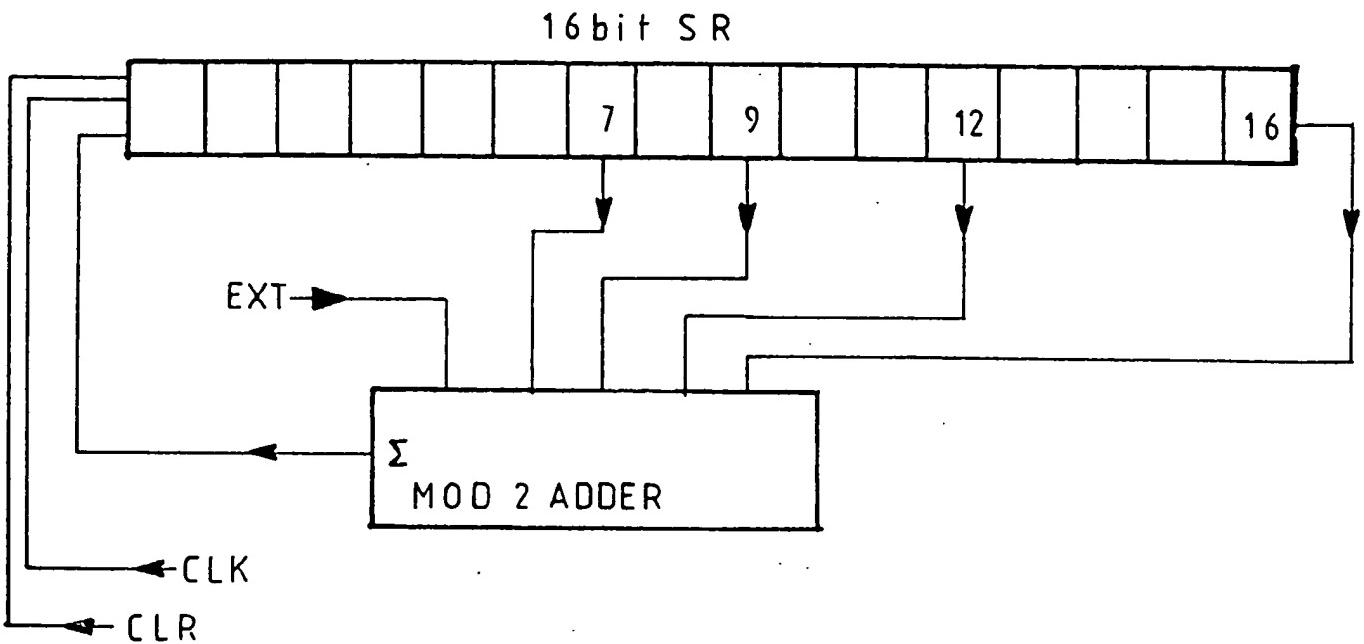


Figure 13  
CHECK WORD GENERATION

In the example shown a 16 bit shift register has as input the modulo-2 sum of an external input and the contents of the 7th, 9th, 12th and 16th stages of the register. Initially the register is cleared to 'all zeros'. During a sequence of 8192 clock pulses the first 24 character bytes (192 bits) of the page header packet and the following character bytes of packets numbers with Y up to 25, in conventional transmission order form the external input. Any absent packets are considered to contain the character SPACE (2/0) throughout. At the end of this process the contents of the register are the Basic Page Check Word and it is transmitted along the register begining with the bit held in the 16th stage.

A-132  
Andy

DESIGNATION CODE	FUNCTION	DATA BITS	1	2	3	5	6	7	4
ROW GROUP 00000	FULL SCREEN COLOUR	No Response		Red	Green	Blue	Reduced Intensity		
ROW GROUP 00001	FULL SCREEN PASTEL COLOURS	16 Pastel Colours					Reduced Intensity		
ROW GROUP 00100	NO RESPONSE								
ROW GROUP 00101	NO RESPONSE								
ROW GROUP 01000	FULL ROW COLOUR	No Response		Red	Green	Blue	Reduced Intensity		
ROW GROUP 01001	FULL ROW PASTEL COLOURS	16 Pastel Colours					Reduced Intensity		
ROW GROUP 01100	NO RESPONSE								
ROW GROUP 01101	NO RESPONSE								
ROW GROUP 10000	NO RESPONSE								
ROW GROUP 10001	NO RESPONSE								
ROW GROUP 10100	NO RESPONSE								
ROW GROUP 10101	NO RESPONSE								
ROW GROUP 11000	NO RESPONSE								
ROW GROUP 11001	NO RESPONSE								
ROW GROUP 11100	NO RESPONSE								
ROW GROUP 11101	NO RESPONSE								
ROW GROUP 11111	PACKETS' 26 TERMINATOR	This code is followed by a 2 byte check digit on the data in packets "26" and packets "28".							
ROW GROUP XXX1X	DRCS MAGAZINE ASSOCIATED	The value of bit 4 in the designation code only applies when in the DRCS Mode, except for group 11111 above.							
	ROW ADDRESS GROUPS								

Figure 14      PACKETS "26" DESIGNATION CODES ALLOCATION  
ROW ADDRESS GROUPS

7-133

7-133

DESIGNATION CODE	FUNCTION	DATA BITS 1 TO 7 INCLUSIVE
SPACE GROUP 00000	ALPHANUMERIC NORMAL	BITS 1, 2 & 3 respectively RED, GREEN & BLUE FOREGROUND
SPACE GROUP 00001	ALPHANUMERIC x 2 HEIGHT	BITS 5, 5 & 7 respectively RED, GREEN & BLUE BACKGROUND
SPACE GROUP 00010	ALPHANUMERIC x 2 WIDTH	BIT 4 FLASHING
SPACE GROUP 00011	ALPHANUMERIC x 2 SIZE	
SPACE GROUP 00100	1st DRCS LATCHING SHIFT	
SPACE GROUP 00101	2nd DRCS LATCHING SHIFT	
SPACE GROUP 00110	MOSAIC NORMAL	
SPACE GROUP 00111	MOSAIC SMOOTHED	
SPACE GROUP 01000 TO SPACE GROUP 01011	PASTEL COLOURS 4 CODES	BITS 1 to 7 inclusive with the 4 Designation Codes define 16 foreground and background colours
SPACE GROUP 01100	NON-SPACING ATTRIBUTES	BIT 1 SEPARATED MOSAIC/UNDERLINE ALPHNUMERICS, BIT 2 BOXING, BIT 3 CONCEAL, BIT 4 REDUCED INTENSITY FOREGROUND, BIT 5 REDUCED INTENSITY BACKGROUND, BIT 6 NO RESPONSE.
SPACE GROUP 01111	1st DRCS SINGLE SHIFT	BITS 1 TO 7 INCLUSIVE DEFINE THE DRCS CHARACTER
SPACE GROUP 01110	2nd DRCS SINGLE SHIFT	
SPACE GROUP 01111	SPECIAL CHARACTER FROM SUPPLEMENTARY SET	BITS 1 TO 7 INCLUSIVE DEFINE THE SUPPLEMENTARY SET CHARACTER
SPACE GROUP 10000 TO SPACE GROUP 11111	ACCENTS FROM SUPPLEMENTARY SET	BITS 1 TO 7 INCLUSIVE DEFINE THE ASSOCIATED PRIMARY SET CHARACTER

Figure 15 PACKETS "26" DESIGNATION CODES ALLOCATION  
CHARACTER-SPACE ADDRESS GROUP

1  
34  
2-183

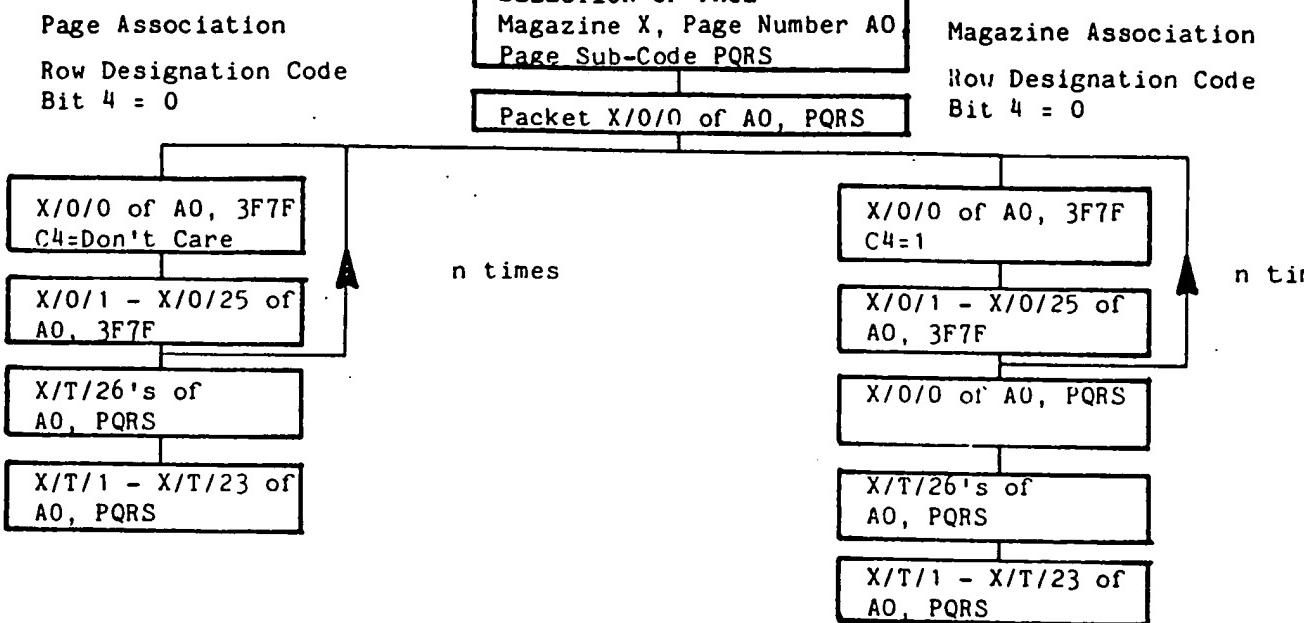


Figure 31 FULL PAGE DRCS DISPLAY PROCEDURE

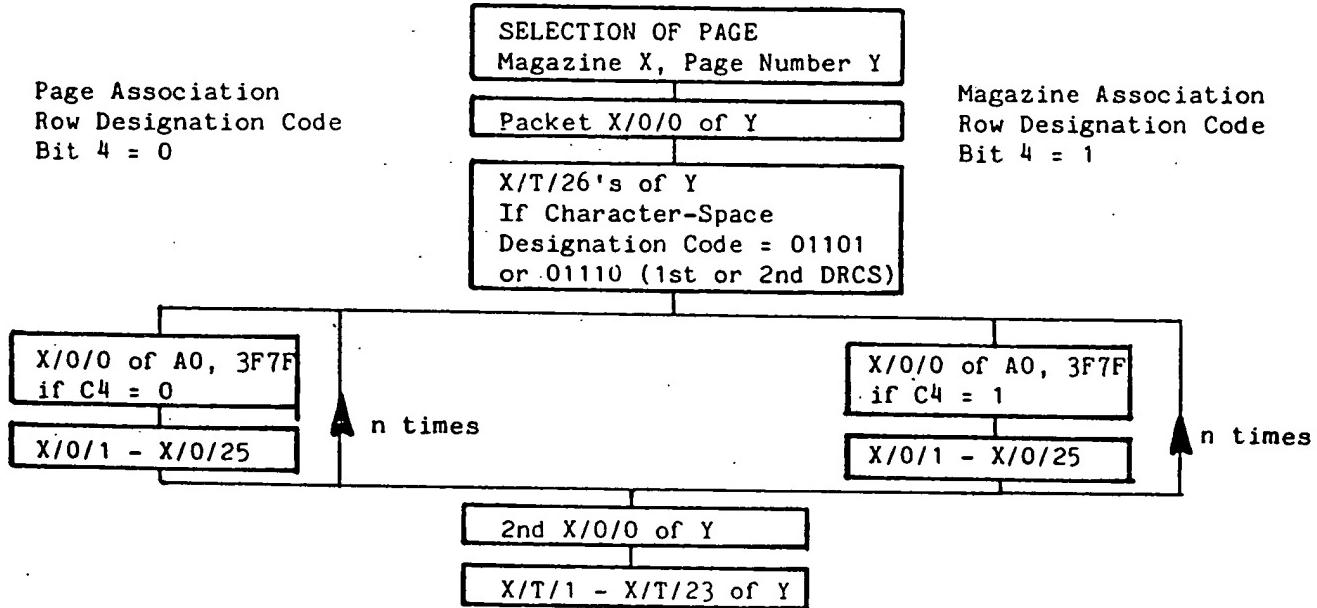
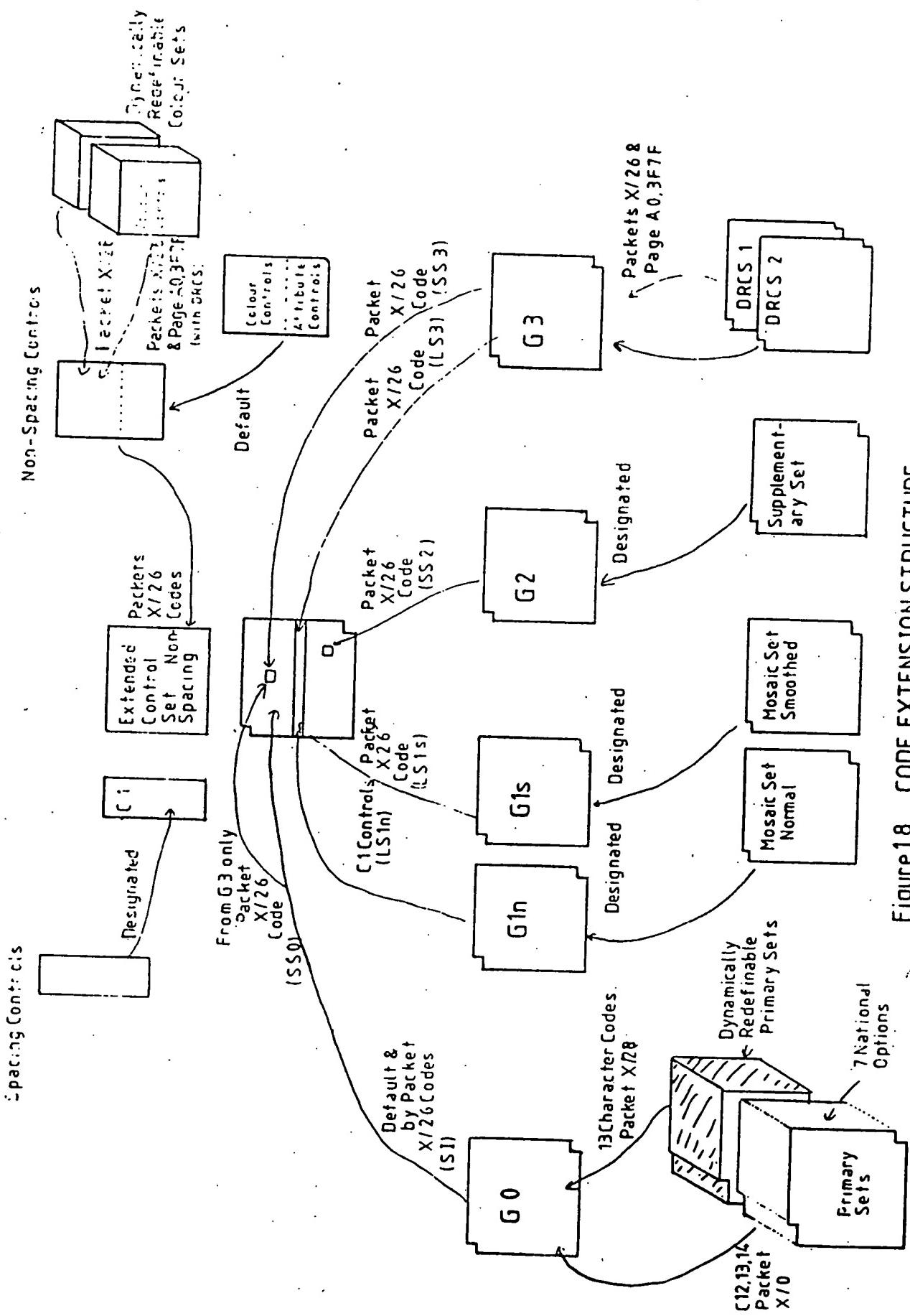


Figure 32 DRCS TO OVERWRITE BASIC PAGE

A-135

A-32



**Figure 18** CODE EXTENSION STRUCTURE

A-136

**X**

**APPENDIX VIII:** ["discrete signals" of "standardized" Teletext  
(exemplified)]

The publication contained within "Appendix VII" of this Office action, has been cited because it exemplifies "standardized" Teletext form/practice. The following is noted:

- 1) As was notoriously well known in the art, on the transmitter side of a Teletext system, a Teletext editor generated the respective Teletext images/frames that were to be transmitted. Each of these images/frames was then encoded into a "series of instructions" which "series of instructions", when transmitted and selectively received at the receiver side of the system, was used by the decoder/receiver to locally generate/re-generate the respective Teletext image/frame for display thereat.  
<sup>53</sup>
- 2) As was notoriously well known in the art, in order to transmit the series of instructions, each series of instructions was first organized into a Teletext "page" format, wherein each formatted "page" was comprised of a plurality of "discrete Teletext packet signals". In the illustrated system of APPENDIX VI, each Teletext "page" included the twenty-eight "discrete Teletext packet signals" having the structure shown on pages "A-17" and "A-18" of said Appendix VI, wherein:
  - A) The first packet of each "page", e.g. packet "X/0/0" on page "A-17", was a header packet which carried various types of control signals associated with the respective "page";
  - B) The next twenty-four packets of each "page", e.g. packets "X/T/1" to "X/T/23" on page "A-17", were information packets each included various sync and address codes along with a 32 character byte information carrying portion for carrying a 32 byte "discrete portion" of the respective "series of instructions" of the respective Teletext image/frame; and
  - C) At least one of the remaining packets of each "page", e.g. packet 4/1/30, was an extension packet which, in the illustrated system, was used to convey:

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<sup>53</sup> Note "APPENDIX E" attached hereto

1. Twenty-three bytes of an "equipment control group" for allowing the remote control/triggering/actuation of downstream network equipment(s);  
[SEE: the paragraph which begins "Optional features..." on the page labeled "A-1" of the publication; and "Equipment Control" in packet 4/1/30 on page labeled "A-18" of the publication]
  2. A program/network label portions for allowing downstream equipment/receivers to identify the program/network being transmitted on the given channel currently being received  
[SEE: figure 12 on the page labeled "A-28" of the publication; and "Program or Network Label" in packet 4/1/30 on page labeled "A-18" of the publication]
  3. ETC,...
- 3) As was notoriously well known in the art, so formatted Teletext "pages" were communicated through the television network:
- A) By embedding each "discrete Teletext packet signal" of each page within a respective vacant line period of the TV programming being distributed by the TV network;
  - B) By communicating the television programming containing the embedded "discrete Teletext packet signals" through the network to a plurality of receiver stations;
  - C) By separating the embedded "discrete Teletext packet signals" from the communicated programming at each of the receiver stations;
  - D) By determining which ones of the separated "discrete Teletext packet signals" correspond to information packets of a desired Teletext page;

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<sup>54</sup> While this document does not list the kind of downstream equipment that was to be controlled by this signal "group", the kind of equipment that could be controlled was in fact notoriously well known in the art [note "APPENDIX VIII" attached hereto].

- E) By decoding those information packets of the desired Teletext page so as to obtain/recover the respective 32 byte information portions therefrom;
- F) By organizing the obtained 32 byte portion back into the original sequence of instructions;
- G) By executing the organized sequence of instructions so as to "locally generate" the desired Teletext image for display at the receiver station.

More specifically, with respect to the exemplified system:

- A) Each transmitted Teletext image was represented by a series of instructions up to 768 character bytes long;
- B) Because each vacant line period of a TV signal did not have the capacity/bandwidth to carry all 768 character bytes at one time, each series of instructions had to be divided up into a plurality of discrete portions/segments which could be carried within a respective plurality of vacant line periods. Specifically, each of the 768 bytes of each series was divided up into 24 portions/segments/rows which were 32 character bytes long (i.e.  $24 \times 32 = 768$ ), and each of these so produced 24 portions/segments/rows was then inserted into a vacant line of a TV signal via a respective one of the 24 information bearing packets "X/T/1" to "X/T/23" shown on page "A-17" of Appendix VI;
- C) On the receiver side of the system: said information bearing packets "X/T/1" to "X/T/23" of a desired/selected Teletext page were then identified and decoded by a Teletext decoder so as to recover the respective discrete 32 byte portions/segments therefrom; these obtained 32 byte portions/segments were then organized/re-organized back into the original 768 byte "series of instructions" and stored in a display memory; and finally, this stored series of instructions was outputted from the display memory in order to instruct a character generator to "locally generate" the desired Teletext image that was to be locally displayed;

4) As was notoriously well known in the art, "series of instructions" representing non-displayable types of data/information, e.g. such as computer software (e.g. "Telesoftware"), were also be formatted into standardized Teletext "pages" and communicated through a TV network in a like manner; e.g. "extended Teletext" <sup>55</sup>. As exemplified by the system of Appendix A, it was explicitly recognized that the information packets "X/T/1" to "X/T/23" of given pages could be used to carry 32 byte "portions"/segments software (e.g. "Telesoftware") in place of the 32 byte "portions"/segments of data which represented displayable Teletext images/frames [SEE: the paragraph which begins "Page addresses have also been reserved for the transmission of Telesoftware..." on page "A-1" of the publication; and section "19." on page "A-16" of the publication; etc,...]. And unless the Telesoftware program comprised less than the 30-40 bytes that could be carried within one vacant TV line, e.g. it being rather doubtful that any computer program would/could be so short, the Telesoftware program was necessarily broken up into a plurality of discrete 30-40 bytes portions to be carried within a respective plurality of the discrete information packets too (e.g. in the same way as the character/graphic instructions were broken up <sup>56</sup> and carried by said information packets as addressed above). Again, for applicant to suggest that Telesoftware/Teletext was not transmitted as a plurality of discrete signal portion/packets that had to be "organized"/re-organized back into a complete instruction sets on the receiver side, is simply founded in an unrealistically low level of skill in the art. Such arguments represent nothing less than a huge misunderstanding and/or misrepresentation of Teletext "prior art".

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<sup>55</sup> Note the discussion in the first 12 lines under the heading "ORACLE and TV Transmission System" which begins in the last 6 lines of the second column on page 561 of the Hedger publication entitled "TELESOFTWARE-VALUE ADDED TELETEXT".

<sup>56</sup> Indeed, Telesoftware programs were often so long that they had to be divided up into discrete 30-40 byte portions filling not just one page but a plurality of "linked" Teletext pages [note the first 6 lines on page 562 of the Hedger publication entitled "TELESOFTWARE-VALUE ADDED TELETEXT" ]